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**National Highway  
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On-scene Investigation / Vehicle to Vehicle  
Dynamic Science, Inc. / Case Number: DS9520  
1985 GMC school bus  
Arizona  
, 1995



**Technical Report Documentation Page**

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16. Abstract <p>This three-vehicle intersection collisions occurred in . 1995 within the intersection of two rural roadways, located in southwestern Arizona.</p> <p>Vehicle 1, a 1985 GMC 72 passenger school bus, was traveling eastbound approaching a four leg intersection at an estimated speed of 8 km/h (5 mph) in a left turn lane intending to turn north. It was being driven by a 51 year old female. It is unknown if she was restrained by the available 2-point manual lap restraint. Vehicle 2, a 1987 Kenworth C-500 dump truck driven by a an unrestrained 23 year old male, fully loaded with gravel and rocks, was traveling southbound at an estimated speed of 50 km/h (31 mph). Vehicle 3, a 1984 Ford F-60 truck pulling a three-axle flatbed trailer was being driven eastbound by an unrestrained 44 year old male at an estimated speed of 48 km/h (30 mph).</p> <p>Vehicle 2 failed to stop at a stop sign and entered the intersection. The driver of this vehicle attempted to avoid the collision by braking and steering to the right. The driver of Vehicle 1 attempted to avoid the impending collision by accelerating straight ahead. The front of Vehicle 2 struck the left rear of Vehicle 1. The initial impact caused Vehicle 1 to rotate counterclockwise, and Vehicle 2 to rotate clockwise resulting in contact between the left upper portion of the bus and the dump box of Vehicle 2. This impact ripped away a portion of the side and roof of the school bus, allowing large rocks and gravel to intrude into the interior of the bus. After impact, both vehicles traveled southwest to their final rest positions. The trailer of Vehicle 3 sustained damage to the left side from the right rear portion of the bus as it was pushed backward. Both Vehicles 1 and 2 were towed from the scene due to damage. Vehicle 3 was driven from the scene under its own power. The trailer of Vehicle 3 was towed from the scene due to damage.</p> <p>As a result of the of the collision with Vehicle 2, one school bus occupant received fatal injuries, seven students were seriously injured, seven more had AIS-1 level wounds, the injury status for ten occupants is unknown, and the driver and other occupants were not hurt.</p> <p>It is believed that the fatal and most serious injuries were sustained by those students who were seated in the left rear portion of the school bus. The fatally injured case occupant and the seat in which he was riding in were ejected from the school bus.</p>					
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*The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.*

*Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crash-worthiness performance of the involved vehicle(s) or their safety systems.*

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**Dynamic Science, Inc.**  
**Accident Investigation**  
**Case Number: DS9520**

**TABLE OF CONTENTS**

Technical Summary .....	1
Accident Data .....	2
Injury Severity .....	2
Ambience .....	2
Roadway .....	3
Traffic Control .....	3
Vehicles .....	4
Vehicle Damage .....	5
Collision Sequence .....	6
Pre- Crash .....	6
Crash .....	7
Post Crash .....	7
Occupant Kinematics .....	7
Scene Clearance .....	8
Safety Standards .....	8
Driver and Other Occupants .....	9
Injuries .....	23
Collision Measurements .....	28
School Bus Seating Chart .....	29
Photo Index .....	30
Diagram .....	31

**TECHNICAL SUMMARY:**

This three-vehicle intersection collisions occurred in ; 1995 within the intersection of two rural roadways, located in

Vehicle 1, a 1985 GMC 72 passenger school bus, was traveling eastbound approaching a four leg intersection at an estimated speed of 8 km/h (5 mph) in a left turn lane intending to turn north. It was being driven by a 51 year old female. It is unknown if she was restrained by the available 2-point manual lap restraint. Vehicle 2, a 1987 Kenworth C-500 dump truck driven by a an unrestrained 23 year old male, fully loaded with gravel and rocks, was traveling southbound at an estimated speed of 50 km/h (31 mph). Vehicle 3, a 1984 Ford F-60 truck pulling a flatbed trailer was being driven eastbound by an unrestrained 44 year old male at an estimated speed of 48 km/h (30 mph).

Vehicle 2 failed to stop at a stop sign and entered the intersection. The driver of this vehicle attempted to avoid the collision by braking and steering to the right. The driver of Vehicle 1 attempted to avoid the impending collision by accelerating straight ahead. The front of Vehicle 2 struck the left rear of Vehicle 1.

The initial impact caused Vehicle 1 to rotate counterclockwise, and Vehicle 2 to rotate clockwise resulting in contact between the left upper portion of the bus and the dump box of the Vehicle 2. This impact ripped away a portion of the side and roof of the school bus, allowing large rocks and gravel to intrude into the interior of the bus. After impact, both vehicles traveled southwest to their final rest positions. The trailer of Vehicle 3 sustained damage to the left side from the right rear portion of the bus as it was pushed backward. Both Vehicles 1 and 2 were towed from the scene due to damage. Vehicle 3 was driven from the scene under its own power. The trailer of Vehicle 3 was towed from the scene due to damage.

As a result of the of the collision with Vehicle 2, one school bus occupant received fatal injuries, seven students were seriously injured, seven more had AIS-1 level wounds, the injury status for ten occupants is unknown, and the driver and other occupants were not hurt.

Based on our inspection of the school bus, it is believed that the fatal and most serious injuries were sustained by those students who were seated in the left rear portion of the school bus. The fatally injured case occupant and the seat in which he was riding were ejected from the school bus. He received an avulsion of the scalp on the right side. There was also hemorrhage in the right temporal area and in the front parietal scalp. There was brain edema and mild subarachnoid hemorrhage on the right parietal occipital area and on the right cerebellar hemisphere. The victim also sustained fractures to the right clavicle, left anterior rib and pelvis. He had extensive hemorrhage to his chest area internally, including both lungs. He also sustained avulsion of the muscle along the vertebrae and numerous contusions, lacerations and abrasions. The sources of the injuries were unknown because of the numerous events that occurred in the collision from the major intrusion into the bus and ejection of the case occupant to flying rocks and glass.

**ACCIDENT DATA:**

Location:

Area/Type: Rural

Date/Time: Summer/Morning

Accident Type: School Bus/Truck/Truck

**INJURY SEVERITY:**

Vehicle 1 Driver, no injury

Occupant 2 was apparently not injured

Occupants 3, 5, 6, 13, 16, 17, 19, 24, 25, 28 had unknown injuries

Occupants 4, 7, 8, 10, 11, 14, 15, and 21 sustained contusions, lacerations and abrasions (AIS-1) injuries

Occupants 9, 12, 18, 20, 22, 23, and 26 had serious injuries

Occupant 27 ( the case occupant), AIS-5 (fatal)

Vehicle 2 Driver, no injury

Vehicle 3 Driver, no injury

**AMBIENCE:**

Viewing Conditions: No viewing restrictions

Cloud Cover: None

Precipitation: None

Temperature: 41° c (105° F)

Road Surface: Dry

**ROADWAY:**

	Vehicle 1	Vehicle 2	Vehicle 3
Type	Rural Arterial	Rural Arterial	Rural Arterial
Traffic Density	Moderate	Moderate	Moderate
Width	11.0 m (36.2 ft)	8.8 m (28.9 ft)	11.0 (36.2 ft)
Median	None	None	None
Edge	South edge 2.3 m (7.7 ft) Paved shoulder	Gravel shoulder	South edge 2.3 m (7.7 ft) paved shoulder
Surface	Asphalt	Asphalt	Asphalt
Coefficient of friction	.70	.70	.70
Horizontal alignment	Level	Level	Level
Vertical alignment	Level	Level	Level

**TRAFFIC CONTROL:**

	Vehicle 1	Vehicle 2	Vehicle 3
Signals	None	Stop sign	None
Speed limit	80 km/h (50 mph)	64 km/h (40 mph)	80 km/h (50 mph)

Markings: All legs of the intersection have standard lane markings

**VEHICLES:**

	Vehicle 1	Vehicle 2	Vehicle 3
Description	1985 GMC 6000	1987 Kenworth C-500	1984 Ford F-60 & flatbed trailer
Odometer	85,190 km (52,936 mi)	291,483 km (181,124 mi)	Unknown
Engine	V8/gas	Cummins NT	Unknown
Vehicle	72 passenger Bluebird School bus body mounted on a chassis	579.0 cm (19.0 ft) dump body on 6-4 chassis	Unknown
Tire Condition	2 front (new) 4 rear (good)	left front (poor) right front (good) 10 rear (good)	2 front (good) 4 rear (good)
Manual Restraints	2 -point manual lap restraint, driver only	2-point manual lap restraint, driver only	Unknown
Automatic Restraints	None	None	None
Reported Defects	None	Brakes out of adjustment	None
Cargo	None	Loaded with rocks	Loaded with Service Equipment
Windshield damage	None	None	None
Fleet Company	County school	Irrigation district	packing company
Tow Status	Towed due to collision damage	Towed due to collision damage	driven away (trailer towed)

**VEHICLE DAMAGE:**

	<b>Vehicle 1</b>	<b>Vehicle 2</b>	<b>Vehicle 3</b>
	Major damage was sustained in two impacts. There was major damage to the left side from impact # 1. Maximum crush was measured at the area of 7 <sup>th</sup> row left side at 36.0 cm (14.2 in). Left side damage from 1 through 12 averaged 9.7 cm (3.8 in) of crush. The top was torn away from the 6 <sup>th</sup> row back and impaled on Vehicle #2's rock guard on the dump bed allowing the cargo of rocks and gravel to fall into Vehicle 1's passenger compartment. Numerous seats were leaning with large rocks on them. The 12 <sup>th</sup> row left side seat (case occupant) was ripped from its mooring and ejected. The right rear portion had approximately 124.0 cm (57.9 in) of crush at the right rear bumper corner from the 2 <sup>nd</sup> impact.	Moderate damage to left front bumper with approximately 50.0 cm (19.7 in) of crush at left front bumper corner. The left front axle was displaced rearward 30.0 cm (11.8 in) The left front tire was deflated and a portion of fiber glass fender was torn away. The dump bed was displaced but this may have occurred when Vehicle 2 rolled onto its left side after initial impact.	No damage was done to the power unit. The trailer was heavily damaged on the left side. The tandem axle was displaced rearward. The mounting neck was deformed by impact.

	Vehicle 1	Vehicle 2	Vehicle 3
Impact speed (estimated)	8 km/h (5 mph)	50 km/h (31 mph)	48 km/h (30 mph)

Total Delta V:

Longitudinal Delta V:

Delta V not computed

Lateral Delta V:

Vehicles and impacts are out of scope

Energy Dissipation:



**COLLISION SEQUENCE:****Pre- Crash:**

This three-vehicle crash occurred during the morning of a fall weekday on a three-lane, undivided, rural, asphalt, roadway at a four-way intersection in . The weather was clear , the roadway was dry and free of structural defects. Traffic was moderate and there were no viewing restrictions. The statutory speed limit is 80 km/h (50 mph).

The east/west roadway is approximately 11.0 meters (36.2 ft) in width. There is a 2.6 meter (8.5 ft) paved shoulder on the north edge and a 2.3 meter (7.7 ft) paved shoulder on the south edge. There is a turn lane 3.6 meter (11.7 ft) wide on the eastbound side for traffic intending to turn west. The north/south roadway is approximately 8.8 meters in width (28.9 ft). The southbound traffic lane is 4.8 meters ( 15.8 ft) wide. There is a stop sign for southbound traffic intending to turn west. Due to recent resurfacing, the solid white turn lane line was not in place at the time of this collision. Both collision involved roadways are straight and level with an estimated coefficient of friction of .70.

The Vehicle 1 (case vehicle), a 72 passenger, conventional school bus, constructed on a 1985 GMC 6000 chassis, was being driven east in the eastbound left turn lane, by the 51 year old female driver, at estimated speed of 8 km/h (5 mph). It is not known if the driver was wearing the 2-point manual lap restraint. Vehicle 1 was not equipped with passenger safety restraints; therefore occupants 2 through 28 were not restrained. Occupant 27, the case occupant, was seated in seat 1, row 12.

The driver of Vehicle 1 attempted to avoid the collision by accelerating straight ahead.

Vehicle 2, a 1987 Kenworth C-500 dump truck was traveling south in the southbound traffic lane, driven by a 23 year old male, at an estimated speed of 50 km/h (31 mph). The driver was not using the available 2-point manual restraint system.

The driver of Vehicle 2 failed to stop at the stop sign, and subsequently attempted to avoid the collision by braking and steering to the right.

Vehicle 3, a 1984 Ford F-60, pulling a flat-bed trailer, was traveling east in the eastbound traffic lane, driven by a 54 year old driver, at an estimated speed of 48 km/h (30 mph). There was no restraint system available.

There was no attempted evasive action taken by the driver of Vehicle 3.

**Crash:**

Vehicle 1 was initially struck by Vehicle 2 on the left side, 480.0 cm (189 in) rearward of the bus' front bumper. The front top of the dump bed (rock guard) penetrated the roof of the bus. The dump truck's left front bumper and left front side also contacted the left rear side of Vehicle 1 approximately 780.0 cm (307 in) rearward of the bus' front bumper. As the left side of the bus was crushed inward, part of the top rear half of the bus was torn away in an "S" pattern and was impaled on the rock guard. The lower rear and back portion of the bus was also torn away from the chassis at impact. During the collision numerous rocks spilled out of the dump bed and into the bus through the opening in the roof and broken window openings.

Vehicle 2 sustained damaged to the left front bumper and left side from initial impact.

**Post crash:**

After impact, Vehicle 1 rotated counterclockwise, traveling in a southwest direction and struck Vehicle 3. The right rear of Vehicle 1 struck the left front side of the flatbed trailer that was being towed by Vehicle 3. Vehicle 1 then continued in a southwest direction to a final rest position approximately thirty feet southwest of the initial impact with Vehicle 2. Vehicle 2 rotated clockwise after impact in a southwest direction and rolled over 1/4 turn on its left side to a final rest position off the road, having traveled approximately 24 m (80 ft) from the initial impact with Vehicle 1. Vehicle 3 was driven to a parked position after impact approximately 122 m (400 ft) east of the collision scene.

**Occupant Kinematics:**

Occupant 27 (the case occupant) was seated in an apparent normal upright position on a floor mounted, bench seat row 12, seat 1. This would be rearmost outboard position of the left side of the bus. The case occupant was 168.0 cm (66 in) in height and weighed 54 kg (120 lbs). His hand and foot positions could not be determined. Passenger safety restraints were not available and the case occupant was not restrained.

The occupant's seat position was in the extreme left rear seating position, well back of Vehicle 1's rear axle. While unconfirmed by occupant contact points, it is probable that the occupant was struck by rocks that tumbled through the opening in the roof. The force of the impact ripped the bench seat he was seated on from the floor. Both he and the seat were ejected from the rear of the bus due to the rear of the bus being torn away from the chassis.

The force of the impact, spilled cargo from Vehicle 2 and the ejection resulted in avulsion of the scalp from the skull on the right side. There was also hemorrhage in the right temporal area and in the front parietal scalp. There was brain edema and mild subarachnoid hemorrhage on the right parietal occipital area and the right cerebellar hemisphere. The victim also sustained fractures to the right clavicle, left anterior rib and pelvis. He had extensive hemorrhage to his chest area internally, including both lungs. He also sustained avulsion of the muscle along the vertebrae column and numerous contusions, lacerations and abrasions.

**Scene Clearance:**

The driver of Vehicle 1 was not injured. Occupant 2 was apparently not injured. Occupants 4, 7, 8, 10, 11, 15 and 21 sustained contusions, lacerations and abrasions (AIS-1) injuries. Occupants 3, 5, 6, 13, 16, 17, 19, 25 and 28 sustained unknown injuries. Occupant 20, 22, 23, 26, 18, 12 and 9 received serious (AIS-2-to3) type injuries. Occupant 27 ( the case occupant) sustained major head and internal injuries; maximum AIS=AIS 5. The case occupant was pronounced deceased at the scene. He was transported to a local hospital morgue for autopsy. All of the other occupants were transported to a local trauma center where even the occupants that were not injured were treated for shock, trauma and emotional disturbance.

**Safety Standards:**

The police indicated that the inspection of Vehicle 2 (1987 Kenworth C-500 dump truck) at the scene by investigating officer revealed that at the time of the collision, the truck only had 25% braking capabilities and that 75% of the brakes were out of adjustment.

**DRIVER AND OTHER OCCUPANTS:**VEHICLE 1

	DRIVER	OCCUPANT 2
Age/Sex	51 year old/Female	14 year old/Male
Seated Position	Left Front	Row 1, Seat 6
Seat type	Box Mounted Bucket	Floor Mounted Bench
Height	Unknown	Unknown
Weight	Unknown	Unknown
Occupant	School Bus Driver	Student
Pre-existing Medical Condition	None reported	None reported
Alcohol Involvement	None	None
Drug Involvement	None	None
Driving Experience	Unknown	N/A
Body Posture	Upright seated position	Unknown
Hand position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	Unknown	Unknown
Additional Occupants	27	26

	OCCUPANT 3	OCCUPANT 4
Age/Sex	Unknown/female	14 year old/Male
Seated Position	Row 2, Seat 1	Row 3, Seat 1
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	67 kg (147 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	25	24

	OCCUPANT 5	OCCUPANT 6
Age/Sex	14 Year old/Female	15 year old/Female
Seated Position	Row 3 Seat 2	Row 3, Seat 5
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	Unknown
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	23	22

	OCCUPANT 7	OCCUPANT 8
Age/Sex	14 Year old/Female	14 Year old/Male
Seated Position	Row 4 Seat 1	Row 4 Seat 3
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	67 kg (147 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	Stitches on Leg
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	21	20

	OCCUPANT 9	OCCUPANT 10
Age/Sex	15 Year Old/Female	17 Year Old/Female
Seated Position	Row 4, Seat 4	Row 4 Seat 6
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	67 kg (147 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	19	18



	OCCUPANT 11	OCCUPANT 12
Age/Sex	14 Year Old/Female	14 Year Old/Female
Seated Position	Row 5, Seat 1	Row 5, Seat 3
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	165 cm (65.0 in)
Weight	Unknown	57 kg (126 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	17	16

	OCCUPANT 13	OCCUPANT 14
Age/Sex	14 Year Old/Female	14 Year Old/Female
Seated Position	Row 5, Seat 4	Row 6 Seat 1
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	67 kg (147 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	15	14

	OCCUPANT 15	OCCUPANT 16
Age/Sex	14 Year Old/Female	Unknown/Female
Seated Position	Row 6, Seat 5	Row 6 Seat 6
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	67 kg (147 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	13	12

	OCCUPANT 17	OCCUPANT 18
Age/Sex	Unknown	16 Year Old/Male
Seated Position	Row 4, Seat 4	Row 4 Seat 6
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	175 cm (69. 0 in)
Weight	Unknown	110 kg (243 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	11	10

	OCCUPANT 19	OCCUPANT 20
Age/Sex	Unknown	16 Year Old/Female
Seated Position	Row 8, Seat 4	Row 9 Seat 1
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	157 cm (62 in)
Weight	Unknown	54 kg (120 lbs)
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	9	8

	OCCUPANT 21	OCCUPANT 22
Age/Sex	14 Year Old/Male	17 Year Old/Female
Seated Position	Row 9, Seat 4	Row 10 Seat 1
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	Unknown
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	7	6

	OCCUPANT 23	OCCUPANT 24
Age/Sex	17 Year Old/Female	Unknown/Female
Seated Position	Row 10, Seat 2	Row10 Seat 4
Seat type	Floor mounted Bench	Floor mounted bench
Height	157 cm (62 in)	Unknown
Weight	77 kg (170 lbs)	Unknown
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	5	4

	OCCUPANT 25	OCCUPANT 26
Age/Sex	Unknown/Female	16 Year Old/Male
Seated Position	Row 10, Seat 5	Row 11 Seat 1
Seat type	Floor mounted Bench	Floor mounted bench
Height	Unknown	Unknown
Weight	Unknown	Unknown
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	3	2



	OCCUPANT 27	OCCUPANT 28
Age/Sex	15 Year Old/Male	15 Year Old/Male
Seated Position	Row 12, Seat1	Row 12 Seat 4
Seat type	Floor mounted Bench	Floor mounted bench
Height	168 cm (66 in)	Unknown
Weight	54 kg (120 lbs)	Unknown
Occupation	Student	Student
Pre existing Medical Condition	None Known	None Known
Alcohol Involvement	None	None
Drug Involvement	None	None
Body Posture	Upright Seated Position	Upright Seated position
Hand Position	Unknown	Unknown
Foot Position	Unknown	Unknown
Restraint Usage	None Available	None Available
Additional Occupants	1	0

**INJURIES:**Vehicle 1

	INJURY	AIS/OIC CODE	ICD-9	SOURCE
DRIVER	Not injured			
OCCUPANT 2	Not Injured			
OCCUPANT 3	Unknown			
OCCUPANT 4	Contusion, head	190402.1,9	620	Flying Rocks
OCCUPANT 5	Unknown			
OCCUPANT 6	Unknown			
OCCUPANT 7	Laceration, left arm	790600.1,2	884.0	Unknown
	Laceration, left side of head	190600.1,2	873.0	Flying Rocks
	Contusion, left side of head	190402.1,2	920	Flying Rocks
OCCUPANT 8	Stitches on leg (previous injury) reopened	890600.1,2	894.0	Seat Bottom
	Contusion, head	190402.1,9	920	Flying Rocks
OCCUPANT 9	Unknown injury, head	115099.7,0	854.0	Window Frame
OCCUPANT 10	Contusion, head	190402.1,9	920	Flying Rocks
OCCUPANT 11	Laceration, Knee	890600.1,9	891.0	Unknown
	Laceration, face	290600.1,9	873.40	Flying Rocks
	Loss of Consciousness	161000.2,0	850.9	Unknown
OCCUPANT 12	Laceration, above upper occipital scalp (6 cm)	190602.1,6	873.0	Flying Rocks
	Closed head injury Amnesia	16100.2,0	850.9	
	C-spine strain	640278.1,6	847.0	
OCCUPANT 13	Unknown			

OCCUPANT 14	Abrasions, left arm	790202.1,2	919.0	Unknown
	Lacerations, top of head	190600.1,6	873.0	Flying Rocks
	Abrasion, right left posterior	890202.1,1	916.0	Unknown
	Contusion, left leg	890402.1,2	924.9	Unknown
	Contusion, right leg	890402.1,1	924.9	Unknown
OCCUPANT 15	Abrasions, unknown location	990200.1,9	919.0	Flying Rocks
	Contusion, right leg	190402.1,9	924.9	Flying Rocks
OCCUPANT 16	Unknown			
OCCUPANT 17	Unknown			
OCCUPANT 18	Laceration, left forehead, over left eye (3.25 cm)	2290602.1,7	873.42	Flying glass
	Cerebral contusion	140602.3,9	851.0	Flying rocks
	Laceration, scalp	160600.1,9	873.0	Flying glass
OCCUPANT 19	Unknown			
OCCUPANT 20	Laceration, left knee (2 cm)	890602.1,2	891.0	Unknown
	Laceration, nose	290600.1,4	873.20	Flying rocks
	Laceration, left hand	790600.1,2	882.0	Flying glass
	Laceration, left forearm	790600.1,2	881.00	Flying glass
	Laceration, right face	290.600.1,1	873.40	Flying glass
	Fracture, vertebrae C-7	650216.2,6	805.07	Unknown
	Fracture, (multiple) nose	251000.1,4	802.0	Flying rocks
	Laceration, top of head	190600.1,6	873.0	Flying rocks
	Cervical strain	640278.1,2	847.0	Non-contact
	Laceration, right wrist	790602.1,1	881.02	Flying glass
	Abrasion, left hand	790202.1,2	914.0	Flying rocks

OCCUPANT 21	Laceration, knee	890600.1,9	891.0	Flying rocks
	Laceration, head	160600.1,9	873.0	Flying glass
OCCUPANT 22	Laceration, left hand	790600.1,2	882.0	Flying glass
	Laceration, right hand	790600.1,1	882.0	Flying glass
	Laceration, face	290600.1,9	873.40	Flying glass
	Laceration, head	190600.1,9	873.0	Flying glass
	Fracture, right clavicle	752200.2,1	810.0	Flying rocks
	Sprained, left hand	750402.1,2	842.1	Unknown
	Abrasions, (multiple) whole body	990200.1,0	919.0	Unknown
	Laceration, interior of mouth	243204.1,8	873.60	Unknown
	Cervical strain	640278.1,6	847.0	Non-contact
OCCUPANT 23	Fracture bilateral and dislocations of TMJ joints of mandible, right jaw went through right ear	250600.1,3 251604.2,3	802.25 830.1	Unknown
	Periorbital and temporal soft tissue swelling	result, no injury	N/A	Unknown
	Laceration, frontal scalp (10 cm)	190604.2,4	873.0	Flying rocks
	Fracture 5 <sup>th</sup> metacarpal of left hand	752002.2,2	815.09	Unknown
	Major laceration, top of head, 100 stitches and staples	190604.2,6	873.1	Flying rocks
	2 <sup>nd</sup> molar, right side tooth broken	251.404.1,8	873.63	Unknown
	1 <sup>st</sup> molar right side tooth broken	251404.1,8	873.63	Unknown
	Incisor, right side bottom, chipped	251404.1,8	873.63	Unknown

	Broken, vessel, left eye	220200.1,2	900.89	Unknown
	Laceration, face, below lip	290600.1,8	873.40	Unknown
	Contusion, left elbow	790404.1,2	923.11	Unknown
	Right temporal and orbital region, dense foreign body	N/A	N/A	Unknown
OCCUPANT 24	Unknown			
OCCUPANT 25	Unknown			
OCCUPANT 26	Laceration, left head	190600.1,2	873.0	Flying rocks
	Unknown injury, right leg	N/A	N/A	Unknown
	Unknown injury, left leg	N/A	N/A	Unknown
OCCUPANT 27 (case occupant)	Contusion, left eye	297402.1,2	621.0	Unknown
	Contusion, right eye	297402.1,1	921.0	Unknown
	Fracture, right clavicle	752200.2,1	810.0	Unknown
	Contusion, right shoulder	790402.1,1	923.00	Unknown
	Contusion, right arm	790402.1,1	923.9	Unknown
	Contusion, right chest	490402.1,1	922.1	Unknown
	Avulsion, scalp	190800.1,9	873.1	Unknown
	Fracture, left 5 <sup>th</sup> rib anterior, with hemothorax in both lungs	450214.3,2	807.05 860.3	Flying rocks
	Avulsion, muscle along vertebrae column	740400.2,9	879.6	Unknown
	Fracture, right pelvis	852600.2,1	808.0	Unknown
	Brain minimal uncal herniation	140202.5,8	854.0	Unknown

	Right parietal occipital hemorrhage	140629.4,1	853.0	Unknown
	Brain contusion, with subarachnoid hemorrhage	140204.5,8	851.4 852.3	Unknown
	lacerations, left elbow	790600.1,2	881.01	Unknown
	Contusions, numerous to body	990400.1,0	924.9	Flying rocks
	Chest left anterior abrasions	490202.1,2	911.0	Unknown
OCCUPANT 28	Unknown			

**COLLISION MEASUREMENTS**

Reference Point: Centerline of East/West Highway

Reference Line: RL #1 is South Edge of North/South Highway  
 RL #2 is North Edge of North/South Highway

DATA POINT RL #1	DISTANCE AND DIRECTION FROM REFERENCE POINT	DISTANCE AND DIRECTION FROM REFERENCE LINE
BRF Skid V1	0	7.8 m N
BLF Skid-V1	31 cm W	7.8 m N
ELF skid-V1	1.9 m W	9.3 m N
ERF skid-V1	1.9 m W	9.3 m N
FRP-RF-V1	9.6 m W	28 cm S
FRP-LF-V1	11.8 m W	30 cm S
FRP-RR-V1	12.2 m W	3.6 m N
Aprox Area of FRP-V2	16.8 m W	10 m S
API #1	7.2 m W	7.3 m N
API #2	12.2 m W	3.4 m N
RL #2		
BLR Scuff V-1	38 cm E	19.5 m N
LR Scuff Midpoint V1	51 cm W	9.3 m N
LR scuff C/O RL #2	4.6 m W	0.0
BRR Scuff	2.1 m W	9.4 m N
ERR Scuff	6.4 m W	2.1 m N

**SCHOOL BUS SEATING CHART**  
(Injury Severity by Seating Position)

DRIVER No Injury
---------------------

SEAT  
ROW

1	2	3
Unk		
AIS-1		
AIS-1	UNK	
AIS-1		AIS-1
AIS-2		AIS-2
AIS-1		
Unk	Unk	SEAT
AIS-3	Unk	SEAT
AIS-2		
AIS-2	AIS-2	
AIS-5		

FRONT DOOR

4	5	6
		No Inj
	Unk	
Unk		AIS-1
Unk		
	AIS-1	Unk
Unk		
AIS-1		
Unk	Unk	
Unk		

**REAR EXIT**



### PHOTO INDEX

PHOTO NO.	VEHICLE NO.	DIRECTION OF PICTURE	SUBJECT MATTER
1	V1	South	View from final rest area across impact area
2	V1	Southwest	View from northeast corner
3	V1	–	View across impact area
4-8	V1	West	View back on Vehicles 1's and 3's approach
9-10	V1	East	Approach of Vehicle 1
11	V1	West	View across impact area
12	V1	N/A	Final rest position area
13	V1	Southwest	View from final rest position area
14-17	V2	South	Approach of Vehicle 2
18	V2	North	View back on Vehicle 2's approach
19	V2	Southwest	View to final rest area to final rest position
20	V1/V2	Southwest	View to final rest area of Vehicles 1 and 2
21-22	–	Northwest	View Northwest
23-25	V2	South	Approach of Vehicle 2
26	V1/V2	–	Impact to final rest position
27	V1	East	Approach of Vehicle 1
28-30	V2	North	View back of Vehicle 2's approach
31	V1	East	Approach view in turn lane
32-46	V1	–	Exterior views of Vehicle 1
47-89	V1	–	Interior views of Vehicle 1
90-103	V2	–	Exterior views of vehicle 2
103-108	V2	–	Interior views of vehicle 2
109-114	V3	–	Exterior views of vehicle 3
115-117	V3	–	Interior views of vehicle 3
120-123	V3	–	Views of trailer of Vehicle 3

























SB20-013



SB20-014



















SB20-023



SB20-024



























SB20-039



SB20-040























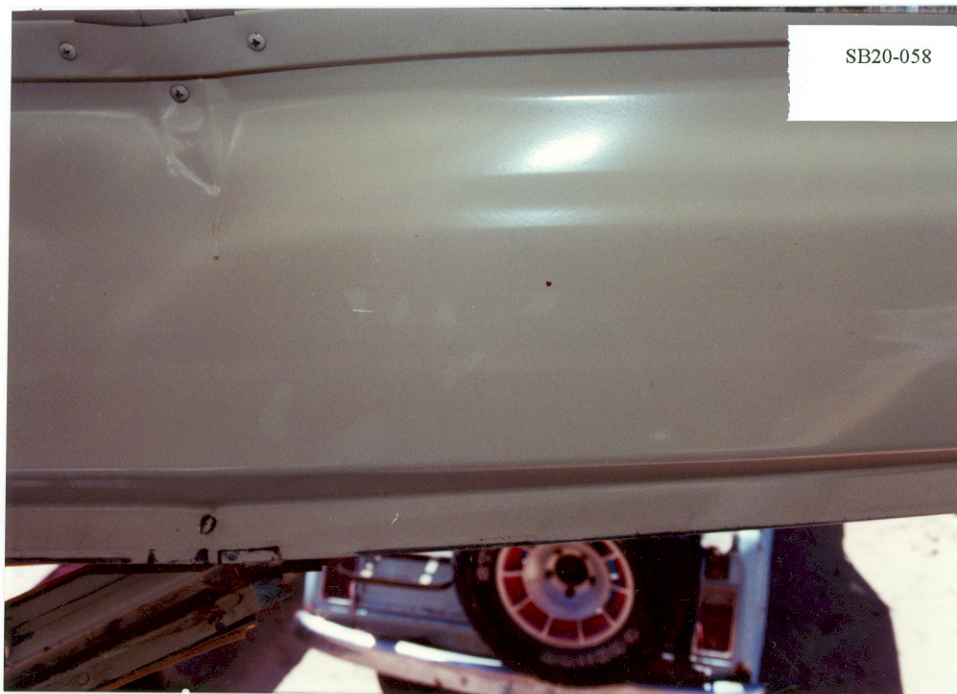
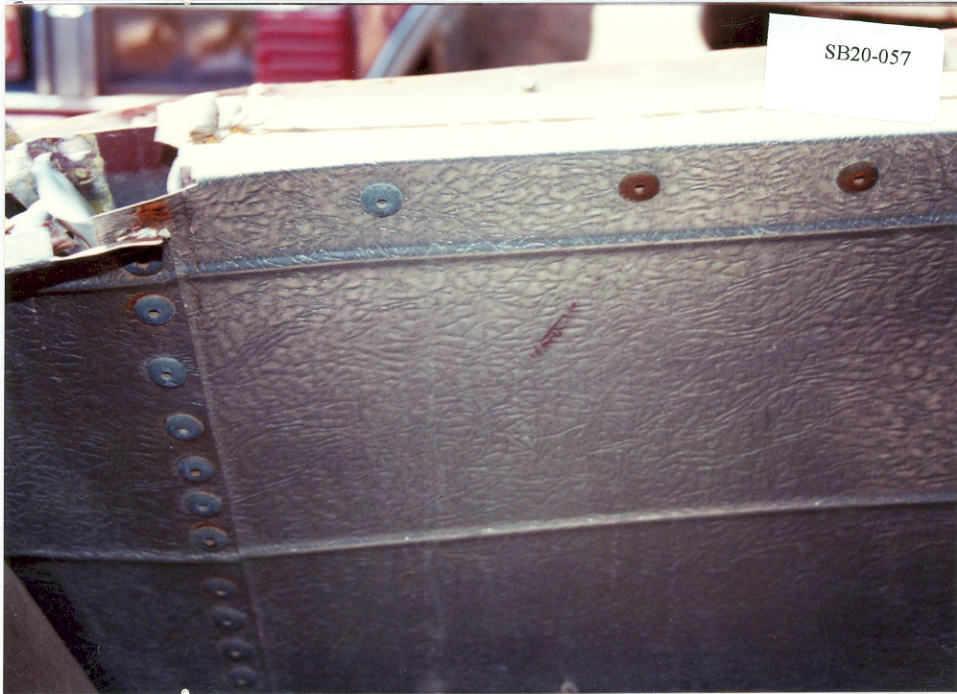








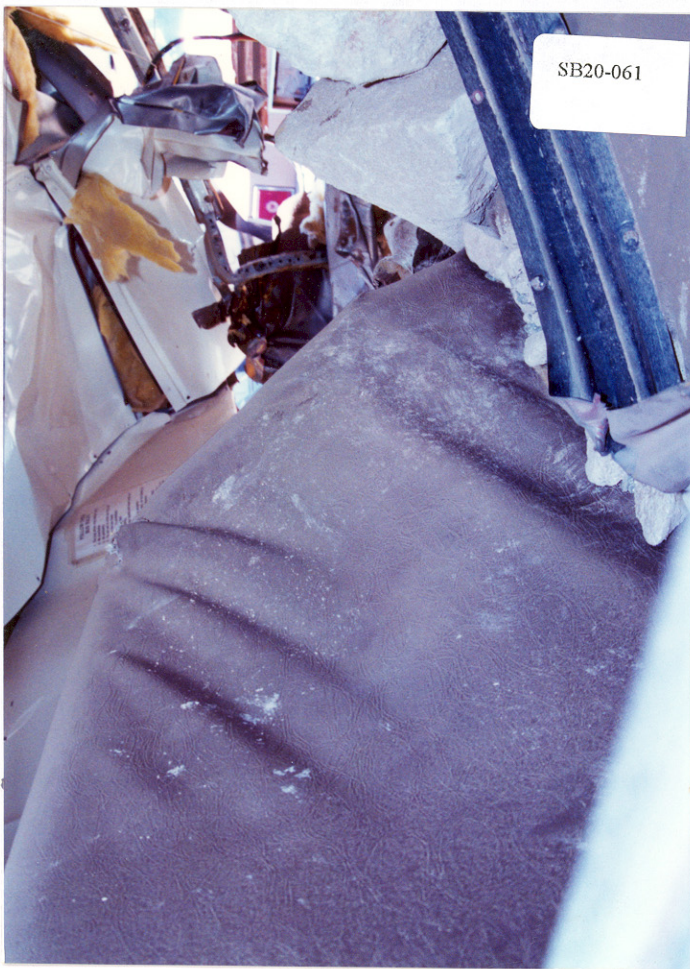








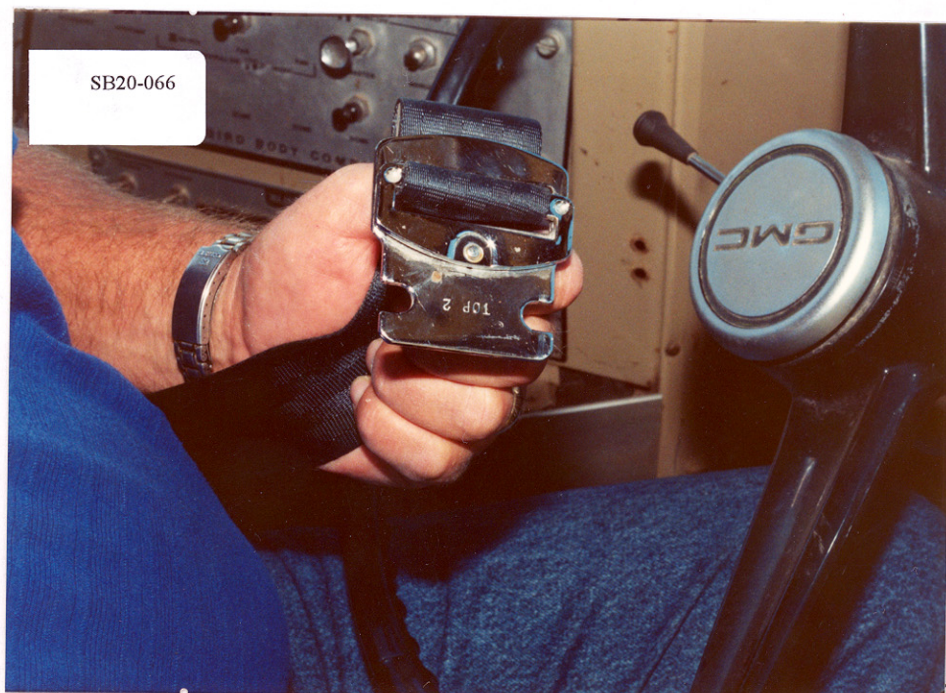










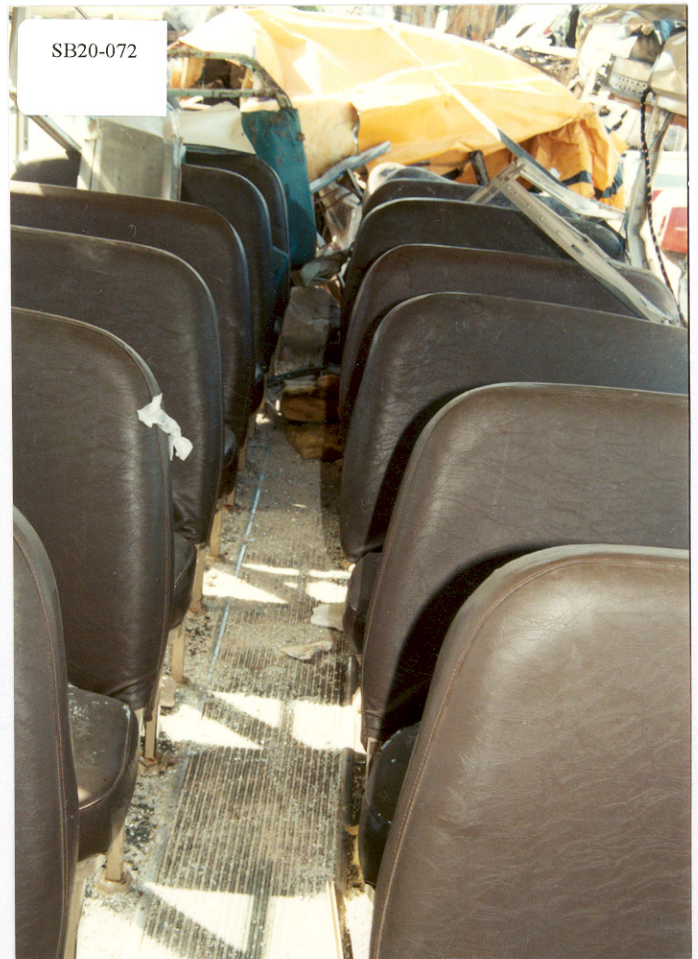


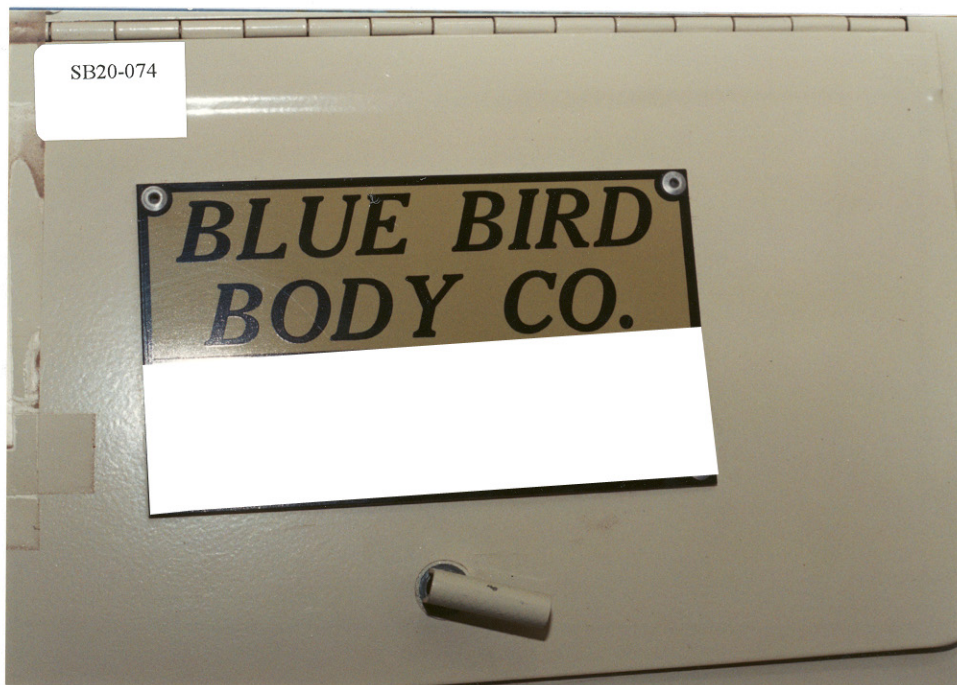
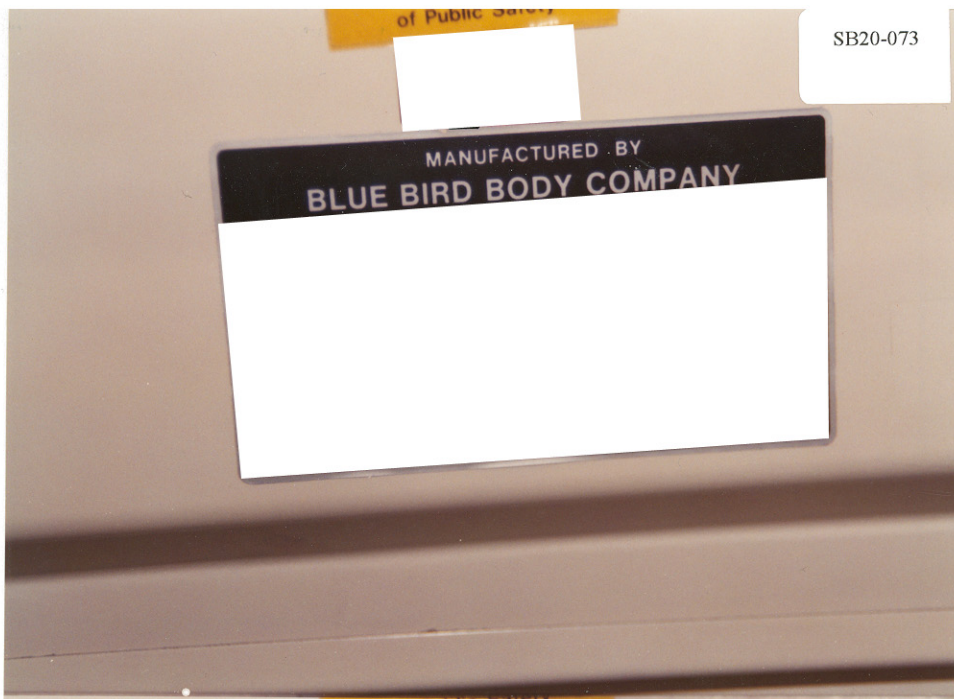














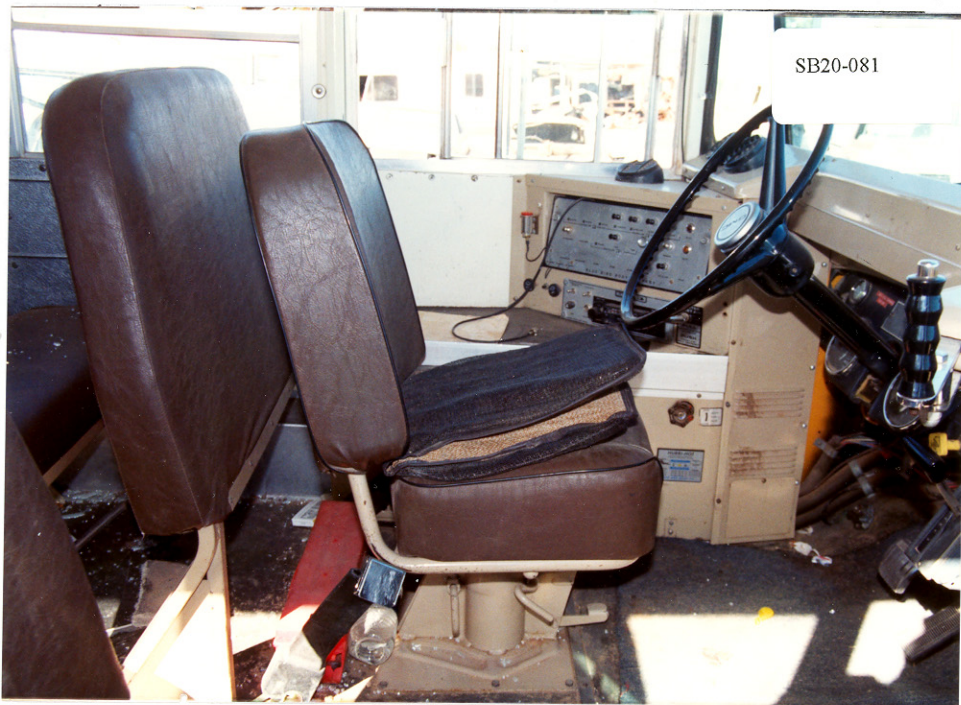






























SB20-093



SB20-094





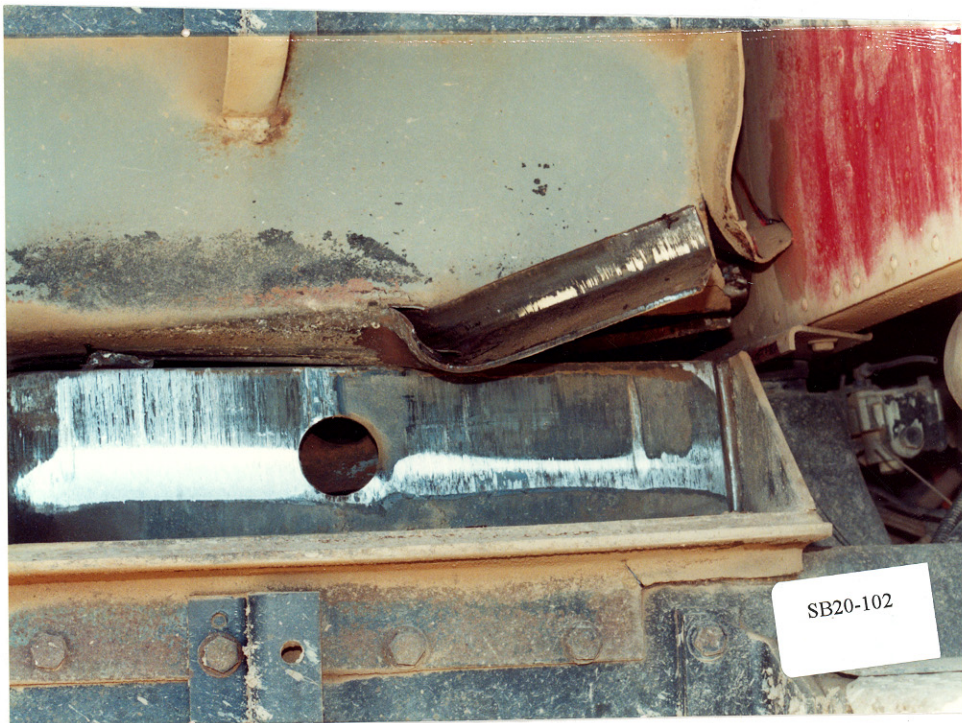
SB20-097













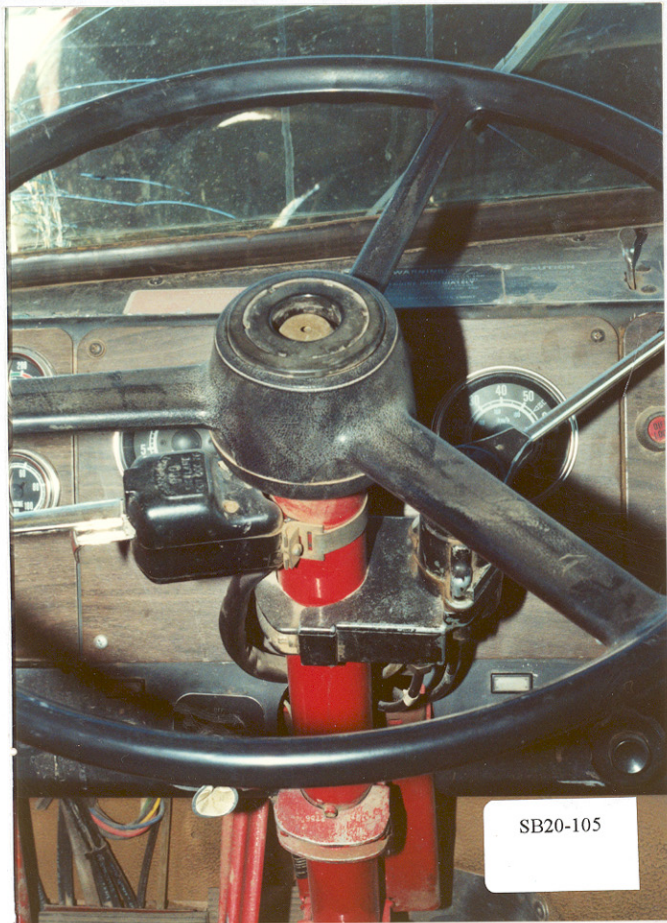


SB20-103

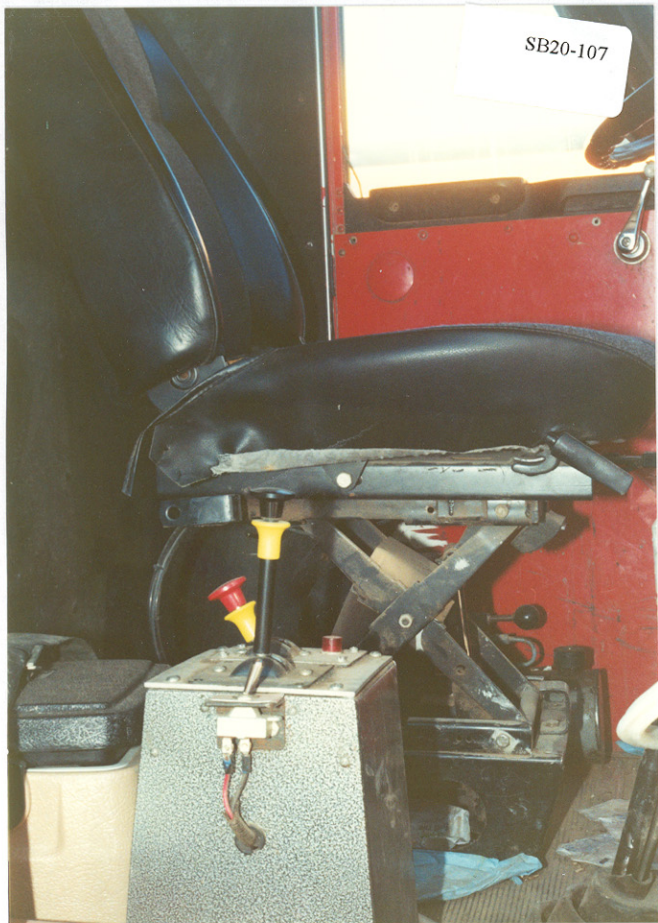


SB20-104





























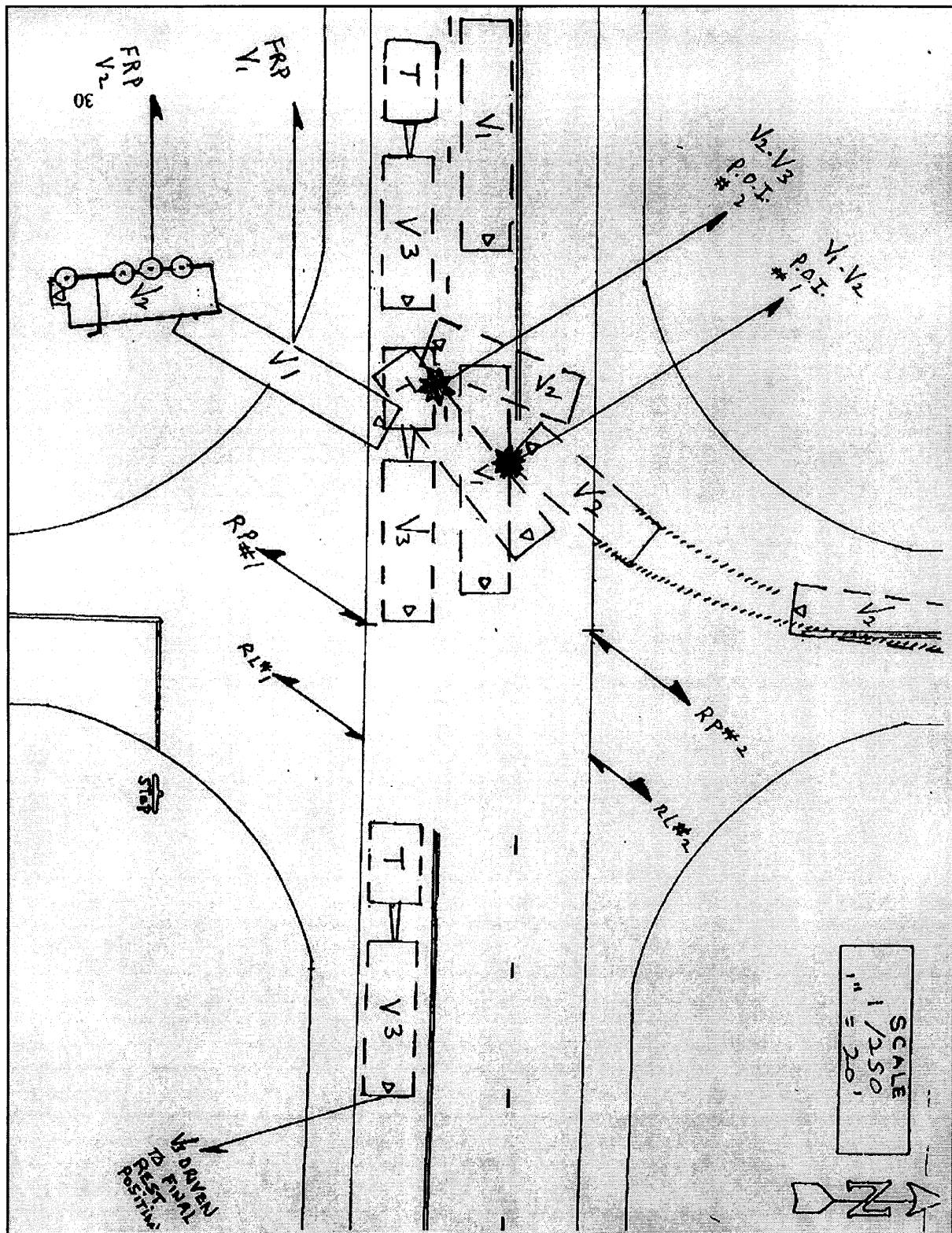








## DIAGRAM



# SCHOOL BUS SEATING CHART

## (Injury Severity by Seating Position)

SEAT ROW	<div> <b>DRIVER</b>  No Injury </div>			<div> <b>FRONT DOOR</b> </div>		
	1	2	3	4	5	6
1						No Inj.
2	Unk.					
3	AIS-1	Unk.			Unk.	
4	AIS-1		AIS-1	Unk.		AIS-1
5	AIS-2		AIS-2	Unk.		
6	AIS-1				AIS-1	Unk.
7	Unk.	(Unk. Seat)				
8	AIS-3	(Unk. Seat)		Unk.		
9	AIS-2			AIS-1		
10	AIS-2	AIS-2		Unk.	Unk.	
11	AIS-1					
12	AIS-5			Unk.		

A  
I  
S  
L  
E

REAR  
EXIT



## **Abbreviations Used In Scene And Photographic Documentation**

ft	Feet
in	Inches
AIS	Abbreviated Injury Scale
BLF	Begin Left Front
BLR	Begin Left Rear
BRF	Begin Right Front
BRR	Begin Right Rear
CBE	Cab Behind Engine
CCW	Counterclockwise
CDC	Collision Deformation Classification
CG	Center of Gravity
CM	Centimeter
COE	Cab Over Engine
CW	Clockwise
E, EB	East, Eastbound
ELF	End Left Front
ELR	End Left Rear
ERF	End Right Front
ERR	End Right Rear
FRP	Final Rest Position
IP	Intermediate Point
KG	Kilogram
KPH	Kilometers Per Hour
LF	Left Front
LR	Left Rear
M	Meter
N, NB	North, Northbound
NE	Northeast
NW	Northwest
PDOF	Principal Direction of Force
POI	Point of Impact
R	Radius of Curvature
RF	Right Front
RL	Reference Line
RP	Reference Point
RR	Right Rear
S, SB	South, Southbound
SE	Southeast
SW	Southwest
U.S.	United States Highway
V1	Vehicle Number 1
W, WB	West, Westbound

YEAR	MONTH	DAY	REPORT ID	NCIC NO.	OFFICER'S ID NO.	Agency Report Number
			HOUR			BEST AVAILABLE
						Total No. of Sheets

Total Injuries	24	Total Fatalities	1	Estimated Total Damage	<input checked="" type="checkbox"/> Over Minimum <input type="checkbox"/> Under Minimum	<input type="checkbox"/> Fatal <input type="checkbox"/> H/R/Run <input type="checkbox"/> Govt. Prop.	District or County
----------------	----	------------------	---	------------------------	---	--	--------------------

Highway

Intersecting Street, Road / M.P. or R.P.

At From

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number	Sex	Inj
--------------	---------------	---------	------	-------	----------	------------------	-----	-----

NONE

72

95

Same Driver

Owner/Carrier Name

Body Style	<input type="checkbox"/> Camper	Make	Color	Year	VIN	Safety Device Code
------------	---------------------------------	------	-------	------	-----	--------------------

DUMP TRUCK

KENWORTH RD

1987

2NKCL2UX9H1

0

Removed in	Removed by	Orders of	Posted Speed Limit	O/C Est Speed	O/C Est Reas
------------	------------	-----------	--------------------	---------------	--------------

40

31

35

0

Insurance Company	Telephone Number	Policy Number	Eff Date / Exp Date
-------------------	------------------	---------------	---------------------

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit
--------------------------------	-------	------	--------------------------------------

U.S. Government Permits (Issuer and Number)	ICC MC:	* Vehicle Type	Number of Axles	G.V.W. (Registered)
---	---------	----------------	-----------------	---------------------

HAZARDOUS MATERIALS PLACARD NUMBER:	Was Hazardous Cargo from the placarded truck released? (Do not include fuel from the vehicle fuel tank)	Yes <input type="checkbox"/> No <input type="checkbox"/>
-------------------------------------	---	--

State	Class	End.	License or Social Security Number	Driver <input type="checkbox"/> Pedestrian <input type="checkbox"/> Pedalcyclist <input type="checkbox"/>	Sex	Inj
-------	-------	------	-----------------------------------	---	-----	-----

Restrictions	Date of Birth	Address	City	State	Zip Code	Telephone Number
--------------	---------------	---------	------	-------	----------	------------------

NONE

43

95

Same Driver

Owner/Carrier Name

Body Style	<input type="checkbox"/> Camper	Make	Color	Year	VIN	Safety Device Code
------------	---------------------------------	------	-------	------	-----	--------------------

SCHOOL BUS

GMC

Yellow

1985

1GDK6P1B3FV

5

Removed in	Removed by	Orders of	Posted Speed Limit	O/C Est Speed	O/C Est Reas
------------	------------	-----------	--------------------	---------------	--------------

50

5

5

5

Insurance Company	Telephone Number	Policy Number	Eff Date / Exp Date
-------------------	------------------	---------------	---------------------

Trailer (Other Unit) Plate No.	State	Year	Description of Trailer or Other Unit
--------------------------------	-------	------	--------------------------------------

U.S. Government Permits (Issuer and Number)	ICC MC:	* Vehicle Type	Number of Axles	G.V.W. (Registered)
---	---------	----------------	-----------------	---------------------

HAZARDOUS MATERIALS PLACARD NUMBER:	Was Hazardous Cargo from the placarded truck released? (Do not include fuel from the vehicle fuel tank)	Yes <input type="checkbox"/> No <input type="checkbox"/>
-------------------------------------	---	--

Seating Position Diagram	10 Not in Passenger Compartment	Safety Devices	4 - Airbag deployed	8 - Passive & lap	Injured Taken to / by
--------------------------	---------------------------------	----------------	---------------------	-------------------	-----------------------

07 04 01  
08 05 02  
09 06 03

11 Motorcycle, Bus  
12 Other  
13 Unknown  
14 Pedalcyclist

1 - None used  
2 - Lap belt  
3 - Lap & shoulder  
5 - Child restraint  
6 - Protective helmet  
7 - Passive belt  
9 - Other  
0 - Unknown

Unit #	Seat Pos	SD	Name	Address	City	State	Age	Sex	Inj
--------	----------	----	------	---------	------	-------	-----	-----	-----

SEE NARRATIVE SEATING CHART

COPY:

FOR:

DATE:

PASSENGERS

WITNESSES

Other Property Damage (Describe)
----------------------------------

Owner's Name	Address	City	State	Telephone Number
--------------	---------	------	-------	------------------

Name	Address	City	State	Telephone Number	Age
------	---------	------	-------	------------------	-----

Name	Address	City	State	Telephone Number	Age
------	---------	------	-------	------------------	-----

Photos Taken	Photographer's Name, ID Number and Agency	Invest. at Scene	Date Invest.	Time Invest.
--------------	---	------------------	--------------	--------------

Officer's Signature and ID Number	Agency	Date Reported
-----------------------------------	--------	---------------

11 - INDICATE NORTH

12 - CITATIONS

UNIT NO. A.H.S. NO. OR CITY CODE

13 - DESCRIBE WHAT HAPPENED

14 - CLASSIFICATION BY TYPE

☐ YES ☒ NO RAN OFF ROADWAY PRIOR TO FIRST HARMFUL EVENT

COLLISION BETWEEN A MOTOR VEHICLE IN TRANSPORT AND

1 ☐ PEDESTRIAN  
2 ☒ MOTOR VEHICLE  
3 ☐ RAILWAY TRAIN  
4 ☐ PEDALCYCLIST  
5 ☐ ANIMAL  
6 ☐ FIXED OBJECT  
7 ☐ OTHER OBJECT

NONCOLLISION INVOLVING A MOTOR VEHICLE IN TRANSPORT

8 ☐ OVERTURNING  
9 ☐ OTHER NONCOLLISION

15 - LIGHT CONDITION  
CHECK ONLY ONE

☒ DAYLIGHT  
☐ DAWN OR DUSK  
☐ DARKNESS

YES NO

☐ STREET LIGHT  
☐ STREET LIGHT FUNCTIONING

16 - WEATHER CONDITIONS  
CHECK ONLY ONE

☒ CLEAR  
2 ☐ RAINING  
3 ☐ CLOUDY  
☐ SNOWING  
☐ STRONG WIND  
☐ DUST  
7 ☐ FOG

ROAD SURFACE TYPE  
CHECK ONLY ONE

1 ☒ ASPHALT  
2 ☐ CONCRETE  
☐ GRAVEL  
☐ DIRT  
☐ OTHER

18 - TYPE OF LOCATION  
CHECK ONLY ONE

☒ INTERSECTION  
2 ☐ JUNCTION AREA  
3 ☐ NON-JUNCTION AREA  
☐ DRIVEWAY ACCESS  
☐ ALLEY ACCESS

19 - INTERSECTION RELATED

YES ☒ NO ☐

20 - SPECIAL LOCATION  
CHECK ONLY ONE

1 ☐ SCHOOL CROSSING  
2 ☐ PEDESTRIAN CROSSWALK (STRIPED)  
3 ☐ PEDESTRIAN CROSSWALK (NO STRIPING)  
4 ☐ BRIDGE  
5 ☐ TUNNEL  
6 ☐ RR CROSSING  
7 ☐ ALLEY  
8 ☐ BIKE PATH  
9 ☐ 2-WAY LEFT TURN LANE

21 - UNUSUAL ROAD CONDITION  
CHECK ONLY ONE

1 ☐ UNDER CONSTRUCTION, TRAFFIC ALLOWED  
2 ☐ UNDER CONSTRUCTION, NO TRAFFIC ALLOWED  
3 ☐ UNDER REPAIRS  
4 ☐ HOLES, RUTS, BUMPS  
5 ☐ OBSTRUCTION - PROTECTED  
6 ☐ OBSTRUCTION - UNPROTECTED  
7 ☐ OBSTRUCTION - UNLIGHTED AT NIGHT  
8 ☐ DEFECTIVE SHOULDERS  
9 ☐ CHANGING ROAD WIDTH  
10 ☐ FLOODED  
11 ☐ TEMPORARY LANE CLOSURE

22 - TRAFFIC CONTROL DEVICES  
LEGEND: A-DEVICE PRESENT  
B-DAMAGED OR NON-FUNCTIONAL PRIOR TO ACCIDENT  
CHECK ANY THAT APPLY

A B

1 ☐ STOP AND GO SIGNAL  
2 ☐ YIELD SIGN  
3 ☐ STOP SIGN  
4 ☐ WARNING SIGN  
5 ☐ RAILROAD SIGNAL  
6 ☐ FLASHING SIGNAL  
7 ☐ FLAGMAN OR OFFICER

23 - NON INTERSECTION ROAD CHARACTER  
CHECK ONLY ONE

1 ☐ 2-WAY STRIPED CENTERLINE  
2 ☐ 2-WAY, NO STRIPE  
3 ☐ 2-WAY, PAINTED MEDIAN  
4 ☐ 2-WAY, RAISED MEDIAN  
5 ☐ 2-WAY, BARRIER MEDIAN  
6 ☐ 2-WAY, DEPRESSED MEDIAN  
7 ☐ 2-WAY, EXTENDED MEDIAN  
8 ☐ 1-WAY STREET

24 - ROAD GRADE  
CHECK ONLY ONE

1 ☒ LEVEL  
2 ☐ DOWNGRADE  
3 ☐ UPGRADE  
4 ☐ HILLCREST  
5 ☐ DIP

25 - UNUSUAL ROAD SURFACE CONDITION  
CHECK ONLY ONE

1 ☐ WET  
2 ☐ LOOSE SAND, DIRT OR GRAVEL  
3 ☐ SNOWY/ICY  
4 ☐ FRESH OIL  
5 ☐ OTHER  
6 ☐ UNKNOWN

26 - PHYSICAL CONDITION  
TWO CHOICES PER PERSON  
MAY BE SELECTED

1 ☒ NO APPARENT DEFECTS  
2 ☐ HAD BEEN DRINKING  
3 ☐ APPEARED TO BE UNDER INFLUENCE OF DRUGS  
4 ☐ ILL-ABILITY INFLUENCED  
5 ☐ SLEEPY/FATIGUED  
6 ☐ OTHER BODY DEFECTS, INFIRMITIES  
7 ☐ UNKNOWN

27 - VIOLATIONS/BEHAVIOR  
TWO CHOICES PER PERSON  
MAY BE SELECTED

1 ☐ NO IMPROPER DRIVING  
2 ☒ SPEED TOO FAST FOR CONDITIONS  
3 ☐ EXCEEDED LAWFUL SPEED  
4 ☐ FAILED TO YIELD RIGHT-OF-WAY  
5 ☐ FOLLOWED TOO CLOSELY  
6 ☒ RAN STOP SIGN  
7 ☐ DISREGARDED TRAFFIC SIGNAL  
8 ☐ MADE IMPROPER TURN  
9 ☐ DROVE IN OPPOSING TRAFFIC LANE  
10 ☐ KNOWINGLY OPERATED WITH FAULTY OR MISSING EQUIPMENT  
11 ☐ REQUIRED MOTORCYCLE SAFETY EQUIPMENT NOT USED  
12 ☐ PASSED IN NO PASSING ZONE  
13 ☐ UNSAFE LANE CHANGE  
14 ☐ OTHER UNSAFE PASSING  
15 ☐ INATTENTION  
16 ☐ DID NOT USE CROSSWALK  
17 ☐ WALKED ON WRONG SIDE OF ROAD  
18 ☐ OTHER  
19 ☐ UNKNOWN

28 - VEHICLE CONDITION  
TWO CHOICES PER VEHICLE  
MAY BE SELECTED

1 ☐ NO APPARENT DEFECTS  
2 ☒ DEFECTIVE BRAKES  
3 ☐ DEFECTIVE STEERING  
4 ☐ DEFECTIVE HEADLIGHTS  
5 ☐ DEFECTIVE TAIL LIGHTS  
6 ☐ DEFECTIVE TURN-SIGNAL  
7 ☐ PUNCTURE OR BLOWOUT  
8 ☐ ONE OR MORE SMOOTH TIRES  
9 ☐ FIRE  
10 ☐ DEFECTIVE WINDSHIELD WIPER  
11 ☐ DEFECTIVE EXHAUST SYSTEM  
12 ☐ OTHER DEFECTS  
13 ☐ NO TRAILER BRAKES  
14 ☐ UNKNOWN

29 - TRAFFIC UNIT ACTION  
CHECK ONE PER UNIT

1 ☐ GOING STRAIGHT AHEAD  
2 ☐ SLOWING IN TRAFFICWAY  
3 ☐ STOPPED IN TRAFFICWAY  
4 ☒ MAKING LEFT TURN  
5 ☐ MAKING RIGHT TURN  
6 ☐ MAKING U TURN  
7 ☐ ENTERING ALLEY OR DRIVEWAY  
8 ☐ LEAVING ALLEY OR DRIVEWAY  
9 ☐ OVERTAKING/PASSING  
10 ☐ CHANGING LANES  
11 ☐ BACKING  
12 ☐ AVOIDING VEHICLE, OBJECT, PEDESTRIAN  
13 ☐ ENTERING PARKING POSITION  
14 ☐ LEAVING PARKING POSITION  
15 ☐ PROPERLY PARKED  
16 ☐ IMPROPERLY PARKED  
17 ☐ DRIVERLESS MOVING VEHICLE  
18 ☐ CROSSING ROAD  
19 ☐ WALKING WITH TRAFFIC  
20 ☐ WALKING AGAINST TRAFFIC  
21 ☐ STANDING  
22 ☐ LYING  
23 ☐ GETTING ON OR OFF VEHICLE  
24 ☐ WORKING ON OR PUSHING VEHICLE  
25 ☐ WORKING ON ROAD  
26 ☐ OTHER  
27 ☐ UNKNOWN

30 - VISION OBSCUREMENT  
CHECK ONE PER UNIT

1 ☒ NOT OBSCURED  
2 ☐ BY PARKED / STOPPED VEHICLE  
3 ☐ BY MOVING VEHICLE  
4 ☐ BY BUILDING  
5 ☐ BY EMBANKMENT  
6 ☐ BY SIGNBOARD  
7 ☐ BY HILLCREST  
8 ☐ BY LOAD ON VEHICLE  
9 ☐ BY TREES, BUSHES  
10 ☐ BY HEADLIGHT  
11 ☐ BY SUN GLARE  
12 ☐ BECAUSE OF BAD WEATHER  
13 ☐ OTHER  
14 ☐ RAIN, SNOW, FOG ON WINDSHIELD  
15 ☐ WINDSHIELD OBSCURED - OTHER  
16 ☐ UNKNOWN

FOR ADOT USE

BEST AVAILABLE



[illegible]

YEAR MONTH DAY			REPORT ID HOUR		NCIC NO.	OFFICERS ID NO.	Agency Report Number
							BEST AVAILABLE

ZERO POINT IS RP

EDGE IS (S) EDGE HWY

REFERENCE POINT IS POLE 1 / 15<sup>th</sup> W

MEASUREMENTS ARE IN FEET AND TENTHS

FOR: 1110

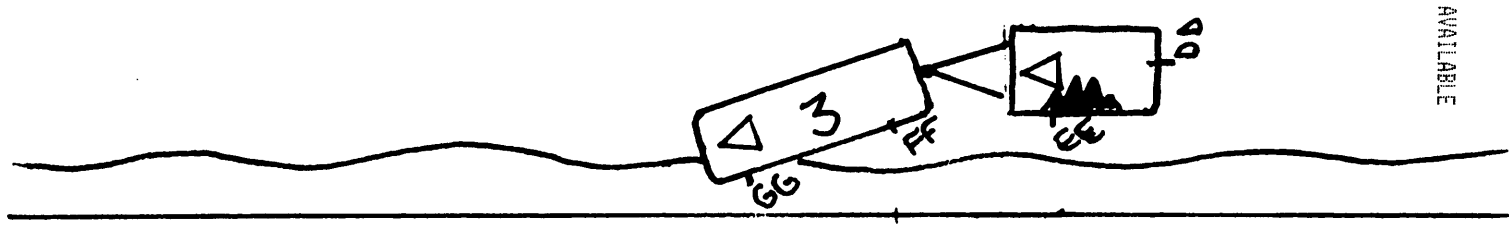
FEET AND INCHES

POINT	FROM EDGE	FROM RP	DESCRIPTION OF POINT MEASURED
A	101 <sup>8</sup> N	336 <sup>6</sup> E	BEGIN LEFT SKUFF VEH. 1
B	66 <sup>10</sup> N	334 <sup>4</sup> E	BEGIN YAW VEH. 1
C	68 <sup>3</sup> N	259 <sup>9</sup> E	LIGHT TIRE SKUFF VEH. 1 BEGIN
D	42 <sup>0</sup> N	97 <sup>7</sup> E	END LIGHT TIRE SKUFF VEH. 1
E	34 <sup>2</sup> N	12 <sup>0</sup> E	TIRE SMEAR LEFT SIDE VEH. 1
F	31 <sup>9</sup> N	26 <sup>10</sup> E	BEGIN LEFT FRONT SKID MARK V-2
G	30 <sup>0</sup> N	23 <sup>3</sup> E	END LEFT FRONT SKID MARK V-2
H	25 <sup>7</sup> N	33 <sup>0</sup> E	BEGIN RIGHT FRONT SKID MARK V-2
I	24 <sup>3</sup> N	22 <sup>1</sup> E	END RIGHT FRONT SKID MARK V-2
J	19 <sup>5</sup> N	16 <sup>0</sup> E	VISIBLE (LIGHT) SKID RF VEH. 2
K	22 <sup>7</sup> N	11 <sup>0</sup> E	DEFLECTION OF LEFT SKUFF V-1
L	11 <sup>1</sup> N	12 <sup>5</sup> W	END VISIBLE TIRE MARKS V-1
M	09 <sup>5</sup> S	0 <sup>8</sup> E	RF TIRE VEH. 2 FINAL REST
N	25 <sup>0</sup> S	3 <sup>3</sup> W	RR TIRE VEH. 2 FINAL REST
O	28 <sup>7</sup> S	17 <sup>5</sup> W	R FAR REAR TIRE VEH. 1 FINAL
P	33 <sup>1</sup> S	17 <sup>2</sup> W	R NEAR REAR TIRE VEH. 1 FINAL
Q	37 <sup>3</sup> S	17 <sup>3</sup> W	DISENGAGED FORWARD (R) AXEL VEH. 1 FINAL
R	49 <sup>0</sup> S	15 <sup>4</sup> W	R FRONT WHEEL VEH. 1 FINAL REST
S	8 <sup>6</sup> S	16 <sup>0</sup> E	BEGIN SKID #1 (TRAILER) VEH. 3
T	9 <sup>1</sup> S	38 <sup>6</sup> E	BEGIN SKID #2 (TRAILER) VEH. 3
U	11 <sup>1</sup> S	52 <sup>0</sup> E	CONNECTION SKIDS #1 & #2 TRAILER V-3
V	13 <sup>9</sup> S	72 <sup>0</sup> E	TRAILER SKIDS (TRAILER) EXIT INTERSTY
W	Ø	167 <sup>3</sup> E	#1 SKID ENTER ROAD VEH. 3 (TRAILER)
X	Ø	192 <sup>6</sup> E	#2 SKID ENTER ROAD VEH. 3 (TRAILER)
Y	12 <sup>6</sup> N	208 <sup>5</sup> E	#1 SKID CROSS CENTERLINE V-3 (TRAILER)
Z	12 <sup>6</sup> N	270 <sup>2</sup> E	#2 SKID TOUCH CENTERLINE V-3 (TRAILER)
AA	12 <sup>6</sup> N	321 <sup>6</sup> E	#1 SKID CROSS BACK CENTERLINE V-3 (TRA
BB	Ø	342 <sup>6</sup> E	#2 SKID EXIT ROAD V-3 (TRAILER)

[illegible]



THE  
FOLLOWING  
IS A  
LIST OF  
THE  
ITEMS  
RECEIVED  
ON  
10/10/54



BEST AVAILABLE



## LEGEND

○ REFERENCE POINT

✚ ZERO POINT

--- SKID MARK

 YAW MARK

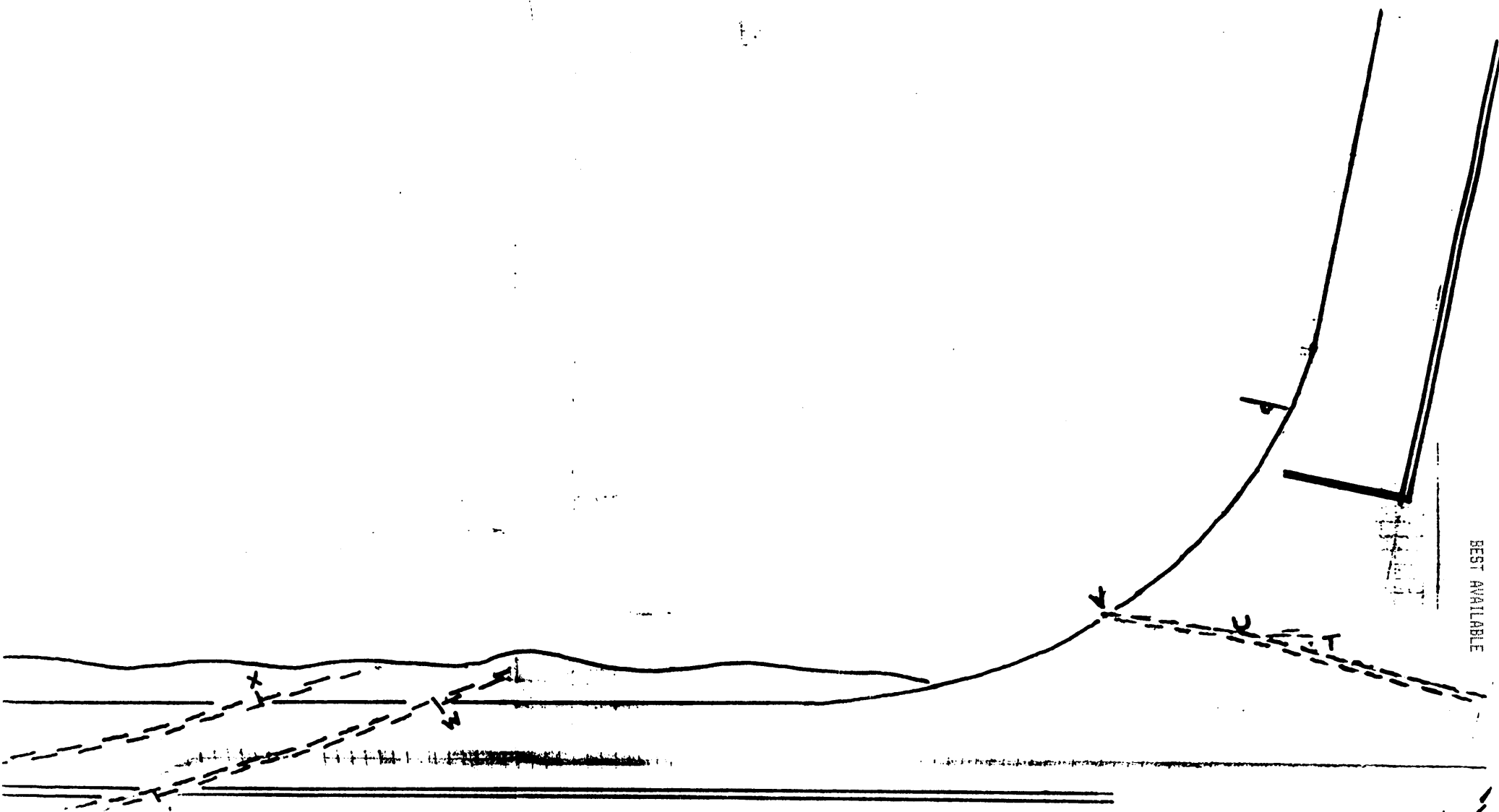
 TIRE SMEAR

 SKUFF

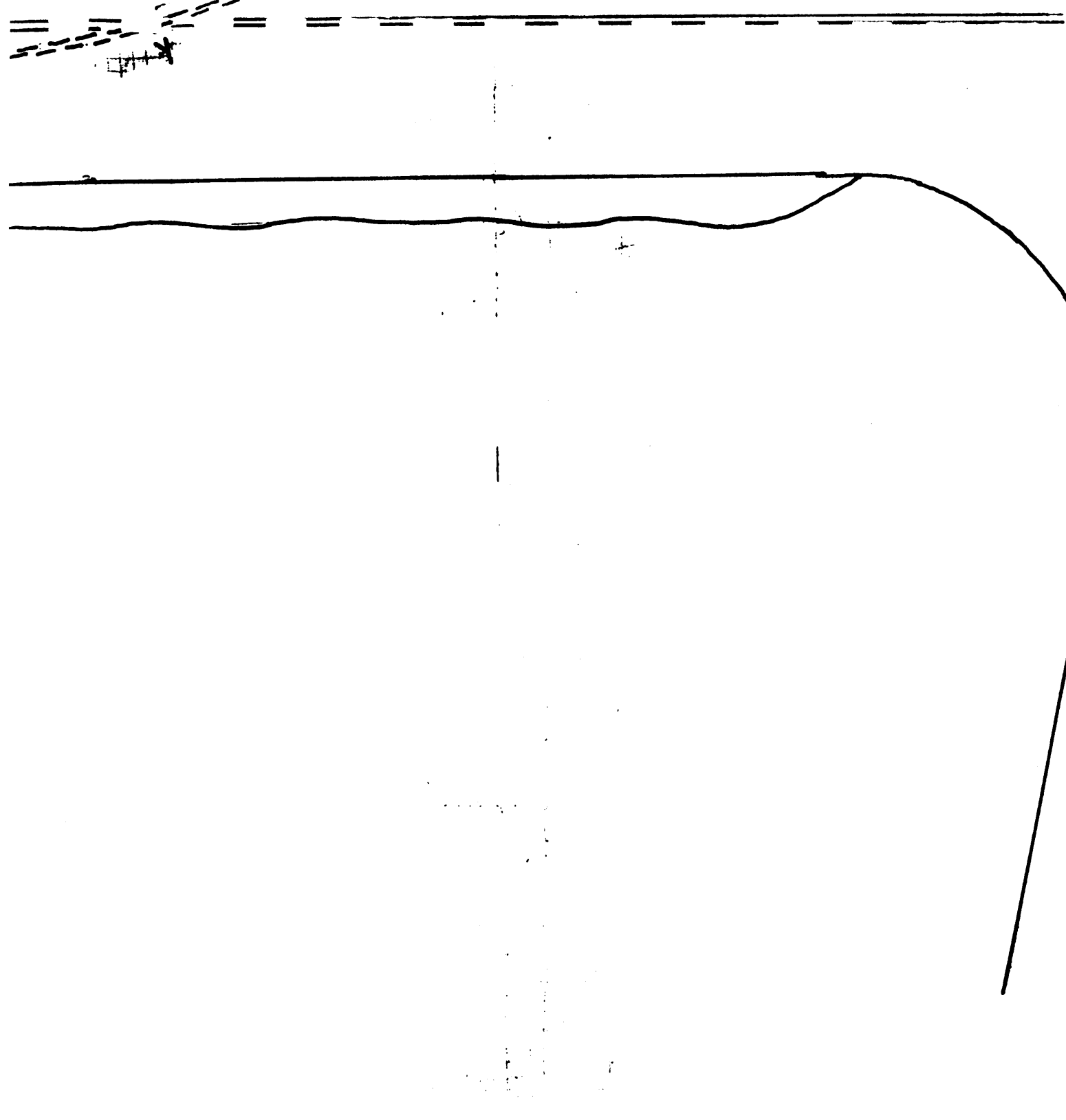
— STOP SIGN



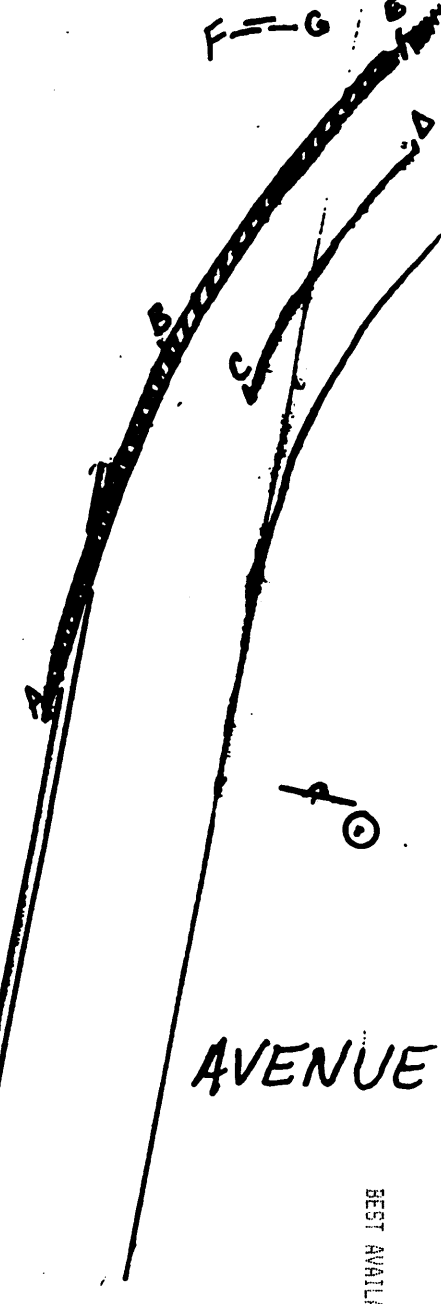
0 10 20  
SCALE



BEST AVAILABLE



H-I  
F-G

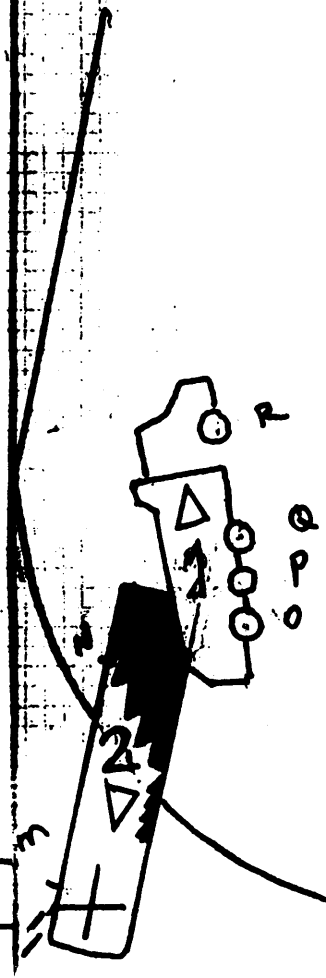


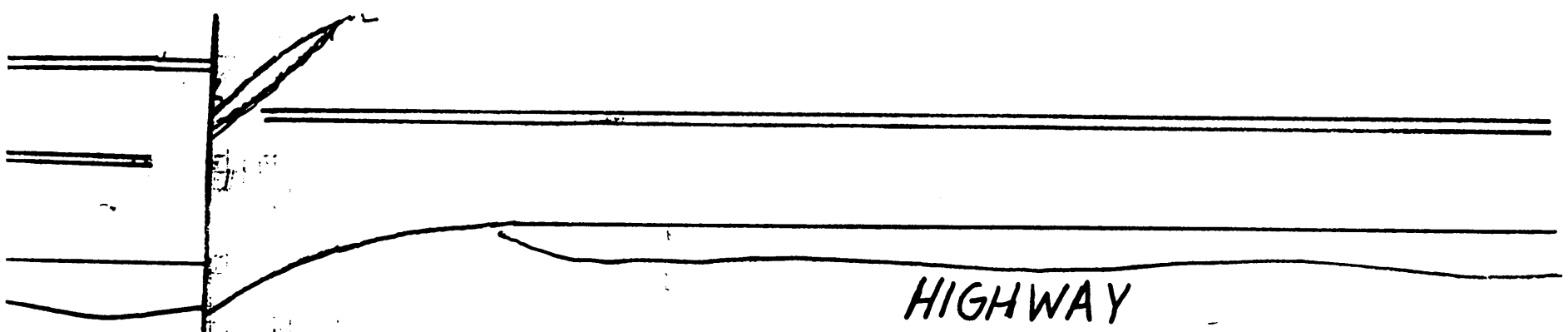
AVENUE

BEST AVAILABLE



N  
↓





BEST AVAILABLE

EAST

**DEPARTMENT  
SUPPLEMENTAL ACCIDENT REPORT**

On : ..... I was assigned to assist in an injury collision that occurred at Avenue  
East and Highway at approximately ... hours.

Upon arrival I observed a heavily damaged dump truck lying on its left side next to a heavily damaged school bus. The school bus was missing approximately one third of the roof and window supports. There were injured children in the bus being treated by adults. There were several people digging in the dump truck load at the rear of the bus.

The dump truck was sitting facing south on its left side and the bus was facing north with a slight easterly cant.

While on scene I assisted with photographs, treating the injured and crowd control as well as obtaining a list of students on that bus.

After the injured were either treated and sent back to the school for transport to Regional Medical Center or transported by medical personnel I assisted with measuring and marking the collision scene.

During this period of time we learned that there was a third vehicle involved in the collision.



Page 2

At \_\_\_\_\_ I requested that the medical examiner be advised of a fatality and requested permission to remove the victim from the scene, as well as an autopsy to be performed. Authorization from \_\_\_\_\_ was given at \_\_\_\_\_ hours.

At \_\_\_\_\_ hours I was advised to go to the \_\_\_\_\_ and \_\_\_\_\_ to obtain a urine sample from the dump truck driver. While enroute to the district I was advised that the driver had left for \_\_\_\_\_ in a private vehicle. I requested that an officer meet him at the emergency room to obtain the urine sample and I returned to the collision scene.

At \_\_\_\_\_ hours Deputy County \_\_\_\_\_ advised he wanted both vehicles impounded at \_\_\_\_\_. I requested two (2) heavy duty tow trucks to the scene. After the vehicles were removed and additional measurements were taken the scene was cleared by all officers.

At \_\_\_\_\_ hours on \_\_\_\_\_ I began the State Accident Form and briefed Sgt. \_\_\_\_\_

At \_\_\_\_\_ hours Corporal \_\_\_\_\_, Sergeant \_\_\_\_\_, and I went to \_\_\_\_\_ High School to begin interviewing the victims. There were only two at the school and Corporal \_\_\_\_\_ completed the interviews.

Page 3

At \_\_\_\_\_ hours I received from Sgt. \_\_\_\_\_ the notes that had been taken at \_\_\_\_\_ by \_\_\_\_\_ Police Department officers the previous morning.

At \_\_\_\_\_ I spoke to Officer \_\_\_\_\_ of the \_\_\_\_\_ and was advised that the urine analysis was required by Federal Motor Carrier Regulation and Title 49 of the \_\_\_\_\_ Revised Statutes. Officer \_\_\_\_\_ had responded to the collision site and had inspected the dump truck. He advised that at the time of the collision the truck only had 25% braking capabilities and that 75% of the brakes were out of adjustment. He further advised that the tag axle was the only axle that was in guidelines for brake adjustment.

At \_\_\_\_\_ hours I went to the laboratory at \_\_\_\_\_ Regional Medical Center and obtained a blood sample that had been taken on \_\_\_\_\_ from the bus driver \_\_\_\_\_ . At \_\_\_\_\_ hours the blood sample was packaged and placed in the evidence refrigerator at the \_\_\_\_\_ Office in \_\_\_\_\_ and labeled \_\_\_\_\_

At \_\_\_\_\_ hours I met with \_\_\_\_\_ of the \_\_\_\_\_ County Attorney's Office where we discussed possible charges and obtaining search warrants for an additional mechanical check of the vehicle and the maintenance records for the dump truck, as well as the driver's \_\_\_\_\_ personnel file from the \_\_\_\_\_

Page 4

On [redacted] I requested a copy of [redacted] driving record from M.V.D. This was obtained by Sgt. [redacted] of the [redacted] County Sheriff's Office.

At approximately [redacted] hours I completed the Fatal Supplement report and entered the victim's personal property into evidence. It was labeled [redacted] I then completed the Department of [redacted] laboratory request form on the [redacted] blood sample.

At [redacted] hours I began preparing search warrants for the mechanical inspection of the truck and obtaining the maintenance records and personnel files for [redacted]

I then called the County Attorney's Office and spoke to Deputy County Attorney [redacted] for a review of the warrants before serving them.

I arrived at [redacted] hours where I met with [redacted] and [redacted] reconstructionist [redacted]

[redacted] did his inspection of the vehicle and determined that the truck jake brake was operational. [redacted] and his team then completed their inspection of the vehicle and the search warrant was completed at [redacted] hours.



Page 5

Prior to serving the first search warrant I contacted the Department of Public Safety to have an officer from the special services section assist with the records inspection.

The \_\_\_\_\_ was closed upon arriving so the search warrant was not served until \_\_\_\_\_ hours.

Present during the service of the search warrant were myself, \_\_\_\_\_ r  
\_\_\_\_\_. They  
furnished us with the documents requested. During the conversation, they  
advised that a \_\_\_\_\_ had been \_\_\_\_\_ trainer with the truck.  
\_\_\_\_\_ further said that if the daily inspection sheet does not show any vehicle  
problems the original copy is discarded.

I then processed the maintenance and personnel files into evidence and labeled them \_\_\_\_\_ through \_\_\_\_\_

At \_\_\_\_\_ hours the County Attorney's Office authorized removal and return of the victim's personal property from the bus. I removed the property I was able to locate (see attached list) and returned it to \_\_\_\_\_ in the \_\_\_\_\_ High School office for distribution.

Page 6

On \_\_\_\_\_ at \_\_\_\_\_ hours Deputy County Attorney \_\_\_\_\_ held a briefing where the results of the vehicle inspection and search warrants were discussed. Present were \_\_\_\_\_ and myself. \_\_\_\_\_ advised that during the on scene inspection the Jake brake switch was in the off position and the truck was in gear.

On \_\_\_\_\_ hours \_\_\_\_\_ and I served a search warrant at the \_\_\_\_\_ to retrieve a copy of their maintenance procedure policies.

Upon arrival we spoke to \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_, \_\_\_\_\_ is the District Manager, \_\_\_\_\_ is the District Comptroller and \_\_\_\_\_ is the Vehicle Maintenance Foreman.

\_\_\_\_\_ advised that they have no written formal policy however, he did explain that every two hundred (200) hours of engine time, or approximately 8000 miles the trucks are serviced, such as lube, oil and filter change and that every 600 hours or 24000 miles the trucks come in for service and a preventative maintenance inspection where they change belts, radiator hoses, coolant and adjust the brakes and fix any other problems found.

Page 7

... also said that the trucks receive an annual safety inspection and a sticker is placed on the truck. When asked about inspection documentation he stated that they don't have a formal check list but they note it in the computer. He then had a copy of the computer entry program given to me. This is listed as ... on the evidence list. ... went on to say that he had certified brake inspectors working in the shop but did not currently have that documentation.

We returned to the ... Substation where I received instruction from E. ... on how to compare the records and document the information obtained.

During the inspection of the records it was determined that they were at best incomplete (no record of yearly inspection) and that servicing was inconsistent with the verbal policy given by ...

On ... hours I spoke to ... advised that he was the front end loader operator at the pit the morning of the collision and that he was the one who determined the size of the load the trucks would carry and that he adjusted the load to the size of the truck. He stated that his loader has a six yard scoop and that he put two scoops in vehicle

He further stated that vehicle ... is a 20 yard truck and he put 12 yards in it.



Page 8

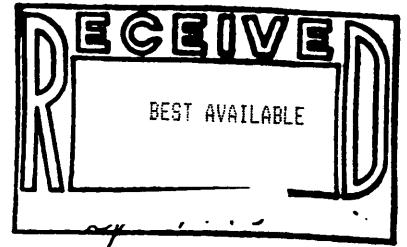
On \_\_\_\_\_ hours I went to \_\_\_\_\_ Library where I met with all the available students who had been on the bus at the time of the collision.

I requested and received 21 written statements as to what the students saw that morning. Some of the students still showed signs of the injuries sustained during the collision and were obviously emotionally upset.

At \_\_\_\_\_ came to the \_\_\_\_\_ Substation and we conducted a taped interview. During the interview she stated that she saw the dump truck a long way from the intersection and when she realized that he wasn't stopping she tried to get out of his way by accelerating the bus. She further stated that the driver of the truck appeared to be trying to avoid the collision by turning the truck. She said that just before the collision he appeared to throw his hands in the air and appeared scared.

CC. 27  
(CASE OCC.)

AUTOPSY REPORT



NAME \_\_\_\_\_ DOB: -80

AUTOPSY NUMBER \_\_\_\_\_

BY ORDER OF \_\_\_\_\_

DATE OF DEATH \_\_\_\_\_

DATE OF AUTOPSY \_\_\_\_\_

WHERE PERFORMED \_\_\_\_\_

PROSECTOR \_\_\_\_\_

FINAL ANATOMIC DIAGNOSIS

Cause of Death:

Immediate Cause of Death; Trauma and asphyxia;  
Due to or as a Cause of; Bus vs dump truck accident (collision).

CC: \_\_\_\_\_  
Records, \_\_\_\_\_ Department

The autopsy is authorized by \_\_\_\_\_, on \_\_\_\_\_ at the \_\_\_\_\_ at approximately \_\_\_\_\_ PM with the help of \_\_\_\_\_, and in the presence of Officer \_\_\_\_\_ of the \_\_\_\_\_.

The body is of a young, \_\_\_\_\_ appearing male in his teens. There is an identifying name tag labeled \_\_\_\_\_, BR physician, \_\_\_\_\_ -76, 119Y M B2". The body has been identified at the morgue by his father in the presence of \_\_\_\_\_

The body is unembalmed, weighs approximately 120 pounds and measures approximately 66 inches in length. The hair is black. The face shows numerous petechiae. There is blood present in the nares. There is edema and chemosis of the left and right eyes. Uncircumcised. The body is covered partially by a black T-shirt, 'Anchor Blue brand blue jeans, the belt has a 'C' in the buckle, 'British Knights' brand boots, and white socks. The body shows on the right thigh clothing markings drawing the right jean pocket. The right clavicle is fractured. There are areas of bruising noted, one going from the area of fracture of the right clavicle all the way to the mid third of the right arm and another one surrounding the right nipple. There are small excoriations noted in the anterior chest on the left side. Uncircumcised. The posterior aspect reveals deep, penetrating, irregular wounds in the left elbow; there are deep pressure marks with clothing patterned on the posterior chest, and numerous patterns and contused pressure marks are present on the trunk. The anterior chest is asymmetric with the left side sunken in relation to the right side.

**Incisions:** The Y-shaped incision is used to examine the contents of the trunk. The intermastoid incision is used to examine the contents of the head.

There is dissection of the scalp from the skull (avulsion) on the right side. Periostial petechiae are noted. There is liquid blood escaping from the scalp pocket created by the avulsion. There is hemorrhage in to the right temporal area and hemorrhage in the frontoparietal scalp. There is no apparent fracture of the skull. The brain weighs 1620 grams and shows edema. Minimal uncal herniation is present. There is mild subarachnoid hemorrhage on the right parietal occipital area and on the right cerebellar hemisphere.

The chest reveals extensive hemorrhage of the soft tissue anteriorly. There is a fracture of the left fifth rib anteriorly. There is no blood inside the thoracic cavity. Minor hemorrhage is found around the upper thoracic vertebral soft tissue. The thymus weighs 30 grams and appears unremarkable.

The abdomen reveals a retroperitoneal hematoma on the right side extending from the diaphragm below with avulsion of muscle (iliopsoas) along the vertebral column. There is a palpable fracture of the right pelvis. A minimal amount of blood is found inside the upper abdominal cavity



surrounding the spleen.

The heart shows no remarkable features. The endocardium, myocardium and pericardium are unremarkable. The valves show no unusual features. The heart weighs 240 grams. There is a minimal degree of atherosclerosis of the coronary vessels.

The right lung weighs 300 grams; the right lung weighs 250 grams. They show congestion. There is extensive hemorrhage in both lungs, mostly subpleural.

The liver weighs 920 grams. It shows small subcapsular hemorrhage on the right side. The organ has a nutmeg appearance on the cut surface.

The spleen reveals a hilar fracture and blood clots in the hilum. A small accessory spleen is present. The spleen itself weighs 50 grams.

The pancreas is of normal size, shape and appearance. It weighs approximately 40 grams.

The appendix is unremarkable.

The stomach contains no food.

The small and large bowel are unremarkable.

There is a large periadrenal hemorrhage on the right side. The right and left adrenal glands themselves are unremarkable.

The right kidney weighs 110 grams; the left kidney weighs 100 grams. The organs reveal congested medulla and pale cortex. There is hemorrhage in the upper pole of the right kidney. The ureters are unremarkable. The urinary bladder reveals no unusual features. The prostate shows no unusual changes.

#### Microscopic Examination

Heart: Sections from pericardium, endocardium and myocardium reveal no unusual features. Sections from coronary vessel reveals minimal atherosclerosis. There is no evidence of hemorrhage or unroofing.

Liver: Section from liver reveals central focal congestion with no necrosis of hepatocytes. There is a minimal degree of subcapsular hemorrhage also present.

Lung: Section from lung reveals severe congestion and hemorrhage with no increase in inflammatory infiltrate. The alveolar spaces are of normal thickness. The bronchioles are unremarkable. A minimal degree of anthracosis is present.

Kidney: Section from kidney reveals congestion. No other remarkable features are identified.

Spleen: Section from spleen reveals congestion. The capsule is of normal thickness. The red and white pulp are unremarkable.

CNS: Sections from CNS reveal mild perinuclear clearing and a minimal degree of congestion. There is a minimal degree of subarachnoid hemorrhage noted in the cerebellar section.

MORGUE CASE -

## SKULL

A single lateral view was taken showing evidence of air inside the cranium. I suspect a fracture in the temporal region, either on the right or left. There are metallic opacities which could represent artifact.

IMPRESSION: There is evidence of air within the cranial cavity.

## CHEST, AP

A very small cardiac silhouette is noted. There is air surrounding the heart suggestive of pneumopericardium. The lungs are not grossly abnormal. There is apparently no pneumothorax. There are multiple artifacts of varying sizes probably representing gravel. No rib fracture is evident.

IMPRESSION: There is evidence of air in the pericardium.

---

PATIENT NAME:

MEDICAL RECORD #: 00 00 00

PATIENT (BILLING) #:

ROOM #:

AGE:

REFERRING PHYSICIAN:

DATE OF SERVICE:

MEDICAL RECORD REPORT

REGIONAL MEDICAL CENTER -





## ACCIDENT FORM

1. Primary Sampling Unit Number \_\_\_\_\_

2. Case Number - Stratum DS1-95-SB-020

## IDENTIFICATION

3. Number of General Vehicle Forms Submitted 0 3

4. Date of Accident (Month, Day, Year) FALL WEEKDAY 9 85

5. Time of Accident MORNING

Code reported military time of accident.

NOTE: Midnight = 2400  
Unknown = 9999

## SPECIAL STUDIES - INDICATORS

Check (✓) each special study (SS15-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.

6. 0 SS15 Administrative Use 0

7. 0 SS16 Pedestrian Crash Data Study 0  
(Data for this special study available in a separate file.)

8. 0 SS17 Impact Fires 0

9. 0 SS18 Unsafe Driver Actions 0

10. 0 SS19 \_\_\_\_\_ 0

## NUMBER OF EVENTS

11. Number of Recorded Events in This Accident 0 3

Code the number of events which occurred in this accident.

## ACCIDENT EVENTS

For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object in the right columns.

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage
12. <u>0 1</u>	13. <u>0 1</u>	14. <u>5 0</u>	15. <u>L</u>	16. <u>0 2</u>	17. <u>6 0</u>	18. <u>F</u>
19. <u>0 2</u>	20. <u>0 1</u>	21. <u>5 0</u>	22. <u>B</u>	23. <u>0 3</u>	24. <u>6 0</u>	25. <u>L</u>
26. <u>0 3</u>	27. <u>0 2</u>	28. <u>6 0</u>	29. <u>R</u>	30. <u>3 1</u>	31. <u>0 0</u>	32. <u>N</u>
33. <u>0 4</u>	34. _____	35. _____	36. _____	37. _____	38. _____	39. _____
40. <u>0 5</u>	41. _____	42. _____	43. _____	44. _____	45. _____	46. _____

IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT

## CODES FOR CLASS OF VEHICLE

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>(00) Not a motor vehicle</li> <li>(01) Subcompact/mini (wheelbase &lt; 254 cm)</li> <li>(02) Compact (wheelbase ≥ 254 but &lt; 265 cm)</li> <li>(03) Intermediate (wheelbase ≥ 265 but &lt; 278 cm)</li> <li>(04) Full size (wheelbase ≥ 278 but &lt; 291 cm)</li> <li>(05) Largest (wheelbase ≥ 291 cm)</li> <li>(09) Unknown passenger car size</li> <li>(14) Compact utility vehicle</li> <li>(15) Large utility vehicle (≤ 4,500 kgs GVWR)</li> <li>(16) Utility station wagon (≤ 4,500 kgs GVWR)</li> <li>(19) Unknown utility type</li> <li>(20) Minivan (≤ 4,500 kgs GVWR)</li> <li>(21) Large van (≤ 4,500 kgs GVWR)</li> <li>(24) Van Based school bus (≤ 4,500 kgs GVWR)</li> <li>(28) Other van type (≤ 4,500 kgs GVWR)</li> <li>(29) Unknown van type (≤ 4,500 kgs GVWR)</li> <li>(30) Compact pickup truck (≤ 4,500 kgs GVWR)</li> </ul> | <ul style="list-style-type: none"> <li>(31) Large pickup truck (≤ 4,500 kgs GVWR)</li> <li>(38) Other pickup truck (≤ 4,500 kgs GVWR)</li> <li>(39) Unknown pickup truck type (≤ 4,500 kgs GVWR)</li> <li>(45) Other light truck (≤ 4,500 kgs GVWR)</li> <li>(48) Unknown light truck type (≤ 4,500 kgs GVWR)</li> <li>(49) Unknown light vehicle type</li> <li>(50) School bus (excludes van based)(&gt; 4,500 kgs GVWR)</li> <li>(58) Other bus (&gt; 4,500 kgs GVWR)</li> <li>(59) Unknown bus type</li> <li>(60) Truck (&gt; 4,500 kgs GVWR)</li> <li>(67) Tractor without trailer</li> <li>(68) Tractor-trailer(s)</li> <li>(78) Unknown medium/heavy truck type</li> <li>(79) Unknown light/medium/heavy truck type</li> <li>(80) Motored cycle</li> <li>(90) Other vehicle</li> <li>(99) Unknown</li> </ul> |
|--|--|

## CODES FOR GENERAL AREA OF DAMAGE (GAD)

- |  |  |   |   |
|--|--|---|---|
| <b>CDS APPLICABLE<br/>AND OTHER<br/>VEHICLES</b> | <ul style="list-style-type: none"> <li>(O) Not a motor vehicle</li> <li>(N) Noncollision</li> <li>(F) Front</li> </ul> | <ul style="list-style-type: none"> <li>(R) Right side</li> <li>(L) Left side</li> <li>(B) Back</li> </ul> | <ul style="list-style-type: none"> <li>(T) Top</li> <li>(U) Undercarriage</li> <li>(9) Unknown</li> </ul> |
|--|--|---|---|
- 
- |  |  |   |   |
|--|--|---|---|
| <b>TDC<br/>APPLICABLE<br/>VEHICLES</b> | <ul style="list-style-type: none"> <li>(O) Not a motor vehicle</li> <li>(N) Noncollision</li> <li>(F) Front</li> <li>(R) Right side</li> </ul> | <ul style="list-style-type: none"> <li>(L) Left side</li> <li>(B) Back of unit with cargo area<br/>(rear of trailer or straight truck)</li> <li>(D) Back (rear of tractor)</li> </ul> | <ul style="list-style-type: none"> <li>(C) Rear of cab</li> <li>(V) Front of cargo area</li> <li>(T) Top</li> <li>(U) Undercarriage</li> <li>(9) Unknown</li> </ul> |
|--|--|---|---|

## CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED

- |   |  |
|---|--|
| <p>(01-30) — Vehicle Number</p> <p>Noncollision</p> <ul style="list-style-type: none"> <li>(31) Overturn — rollover (excludes end-over-end)</li> <li>(32) Rollover — end-over-end</li> <li>(33) Fire or explosion</li> <li>(34) Jackknife</li> <li>(35) Other intraunit damage (specify): _____</li> <li>(36) Noncollision injury</li> <li>(38) Other noncollision (specify): _____</li> <li>(39) Noncollision — details unknown</li> </ul> <p>Collision With Fixed Object</p> <ul style="list-style-type: none"> <li>(41) Tree (≤ 10 cm in diameter)</li> <li>(42) Tree (&gt; 10 cm in diameter)</li> <li>(43) Shrubbery or bush</li> <li>(44) Embankment</li> <li>(45) Breakaway pole or post (any diameter)</li> </ul> <p>Nonbreakaway Pole or Post</p> <ul style="list-style-type: none"> <li>(50) Pole or post (≤ 10 cm in diameter)</li> <li>(51) Pole or post (&gt; 10 cm but ≤ 30 cm in diameter)</li> <li>(52) Pole or post (&gt; 30 cm in diameter)</li> <li>(53) Pole or post (diameter unknown)</li> <li>(54) Concrete traffic barrier</li> <li>(55) Impact attenuator</li> <li>(56) Other traffic barrier (includes guardrail)<br/>(specify): _____</li> </ul> | <ul style="list-style-type: none"> <li>(57) Fence</li> <li>(58) Wall</li> <li>(59) Building</li> <li>(60) Ditch or culvert</li> <li>(61) Ground</li> <li>(62) Fire hydrant</li> <li>(63) Curb</li> <li>(64) Bridge</li> <li>(68) Other fixed object (specify): _____</li> <li>(69) Unknown fixed object</li> </ul> <p>Collision with Nonfixed Object</p> <ul style="list-style-type: none"> <li>(70) Passenger car, light truck, van, or other vehicle not in-transport</li> <li>(71) Medium/heavy truck or bus not in-transport</li> <li>(72) Pedestrian</li> <li>(73) Cyclist or cycle</li> <li>(74) Other nonmotorist or conveyance</li> <li>(75) Vehicle occupant</li> <li>(76) Animal</li> <li>(77) Train</li> <li>(78) Trailer, disconnected in transport</li> <li>(79) Object fell from vehicle in-transport</li> <li>(88) Other nonfixed object (specify): _____</li> <li>(89) Unknown nonfixed object</li> <li>(98) Other event (specify): _____</li> <li>(99) Unknown event or object</li> </ul> |
|---|--|



# GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

DS1-95-SB-020

3. Vehicle Number

01

## VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year  
(99) Unknown

85

5. Vehicle Make (specify):

GMC

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

6. Vehicle Model (specify):

SCHOOL BUS

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

981

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

50

8. Vehicle Identification Number

1GDK6PIB3FV \* \* \* \* \*

Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros  
Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

2

## OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

1

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

008

05 mph X 1.6093 = 008 kmph

12. Speed Limit

(000) No statutory limit

Code posted or statutory speed limit in kmph  
(999) Unknown

080

50 mph X 1.6093 = 080 kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present  
(1) Yes alcohol present  
(7) Not reported  
(8) No driver present  
(9) Unknown

0

14. Alcohol Test Result For Driver

Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

96

Source:

PAR

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present  
(1) Yes other drug(s) present  
(7) Not reported  
(8) No driver present  
(9) Unknown

0

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given  
(1) Drug(s) not found in specimen  
(2) Drug(s) found in specimen, (specify):  
(3) Specimen test given, results unknown or not  
obtained  
(8) No driver present  
(9) Unknown if specimen test given

0

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories

Code actual 5-digit zip code  
(99998) No driver present  
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(7) Other (specify):

1

- (8) No driver present  
(9) Unknown



# CODES FOR BODY TYPE

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): \_\_\_\_\_
- (09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,536$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,536$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ( $\leq 4,536$  kgs GVWR)
- (23) Van based motorhome ( $\leq 4,536$  kgs GVWR)
- (24) Van based school bus ( $\leq 4,536$  kgs GVWR)
- (25) Van based other bus ( $\leq 4,536$  kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): \_\_\_\_\_
- (29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,536$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)
- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,536$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): \_\_\_\_\_
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,536$ kgs GVWR)

- (60) Step van ( $> 4,536$  kgs GVWR)
- (61) Single unit straight truck ( $4,536$  kgs  $<$  GVWR  $\leq 8,845$  kgs)
- (62) Single unit straight truck ( $8,845$  kgs  $<$  GVWR  $\leq 11,793$  kgs)
- (63) Single unit straight truck ( $> 11,793$  kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): \_\_\_\_\_
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2

- (0) Non-interchange area and non-junction  
(1) Interchange area related

*Non-Interchange junctions*

- (2) Intersection related  
(3) Driveway, alley access related  
(4) Other junction (specify) \_\_\_\_\_

- (5) \_\_\_\_\_  
Unknown type of junction

- (9) Unknown

20. Trafficway Flow Ø

- (0) Not physically divided (two way traffic)  
(1) Divided trafficway-median strip without positive barrier  
(2) Divided trafficway-median strip with positive barrier  
(3) One way traffic  
(9) Unknown

21. Number Of Travel Lanes 3

- (1) One  
(2) Two  
(3) Three  
(4) Four  
(5) Five  
(6) Six  
(7) Seven or more  
(9) Unknown

22. Roadway Alignment 1

- (1) Straight  
(2) Curve right  
(3) Curve left  
(9) Unknown

23. Roadway Profile 1

- (1) Level  
(2) Uphill grade (> 2%)  
(3) Hill crest  
(4) Downhill grade (> 2%)  
(5) Sag  
(9) Unknown

24. Roadway Surface Type 2

- (1) Concrete  
(2) Bituminous (asphalt)  
(3) Brick or block  
(4) Slag, gravel, or stone  
(5) Dirt  
(8) Other (specify): \_\_\_\_\_  
(9) Unknown

25. Roadway Surface Condition 1

- (1) Dry  
(2) Wet  
(3) Snow or slush  
(4) Ice  
(5) Sand, dirt, or oil  
(8) Other (specify): \_\_\_\_\_  
(9) Unknown

26. Light Conditions 1

- (1) Daylight  
(2) Dark  
(3) Dark, but lighted  
(4) Dawn  
(5) Dusk  
(9) Unknown

27. Atmospheric Conditions Ø

- (0) No adverse atmospheric-related driving conditions  
(1) Rain  
(2) Sleet/hail  
(3) Snow  
(4) Fog  
(5) Rain and fog  
(6) Sleet and fog  
(7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): \_\_\_\_\_  
(9) Unknown

28. Traffic Control Device Ø

- (0) No traffic control(s)  
(1) Traffic control signal (not RR crossing)

*Regulatory*

- (2) Stop sign  
(3) Yield sign  
(4) School zone sign  
(5) Other regulatory sign (specify): \_\_\_\_\_

- (6) Warning sign (not RR crossing)  
(7) Unknown sign  
(8) Miscellaneous/other controls including RR controls (specify): \_\_\_\_\_

- (9) Unknown

29. Traffic Control Device Functioning Ø

- (0) No traffic control device  
(1) Traffic control device not functioning (specify): \_\_\_\_\_  
(2) Traffic control device functioning properly  
(9) Unknown

**PRECRASH DRIVER RELATED DATA**

30. Driver's Distraction/Inattention To Driving 0 1  
(Prior To Recognition Of Critical Event)  
(00) No driver present  
(01) Attentive or not distracted  
(02) Looked but did not see  
*Distractions*  
(03) By other occupant(s), (specify): \_\_\_\_\_  
(04) By moving object in vehicle (specify): \_\_\_\_\_  
(05) While talking or listening to cellular phone (specify location and type of phone): \_\_\_\_\_  
(06) While dialing cellular phone (specify location and type of phone): \_\_\_\_\_  
(07) While adjusting climate controls  
(08) While adjusting radio, cassette, CD (specify): \_\_\_\_\_  
(09) While using other device/controls integral to vehicle (specify): \_\_\_\_\_  
(10) While using or reaching for device/object brought into vehicle (specify): \_\_\_\_\_  
(11) Sleepy or fell asleep  
(12) Distracted by outside person, object, or event (specify): \_\_\_\_\_  
(13) Eating or drinking  
(14) Smoking related  
(97) Distracted/inattentive, details unknown  
(98) Other, distraction (specify): \_\_\_\_\_  
(99) Unknown
31. Pre-Event Movement (Prior to Recognition of Critical Event) 0 1  
(00) No driver present  
(01) Going straight  
(02) Decelerating in traffic lane  
(03) Accelerating in traffic lane  
(04) Starting in traffic lane  
(05) Stopped in traffic lane  
(06) Passing or overtaking another vehicle  
(07) Disabled or parked in travel lane  
(08) Leaving a parking position  
(09) Entering a parking position  
(10) Turning right  
(11) Turning left  
(12) Making a U-turn  
(13) Backing up (other than for parking position)  
(14) Negotiating a curve  
(15) Changing lanes  
(16) Merging  
(17) Successful avoidance maneuver to a previous critical event  
(97) Other (specify): \_\_\_\_\_  
(99) Unknown
32. Critical Precrash Event 6 6  
**THIS VEHICLE LOSS OF CONTROL DUE TO:**  
(01) Blow out or flat tire  
(02) Stalled engine  
(03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_  
(04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_  
(05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_  
(06) Traveling too fast for conditions  
(08) Other cause of control loss (specify): \_\_\_\_\_  
(09) Unknown cause of control loss

**THIS VEHICLE TRAVELLING**

- (10) Over the lane line on left side of travel lane  
(11) Over the lane line on right side of travel lane  
(12) Off the edge of the road on the left side  
(13) Off the edge of the road on the right side  
(14) End departure  
(15) Turning left at intersection  
(16) Turning right at intersection  
(17) Crossing over (passing through) intersection  
(18) This vehicle decelerating  
(19) Unknown travel direction

**OTHER MOTOR VEHICLE IN LANE**

- (50) Other vehicle stopped  
(51) Traveling in same direction with lower steady speed  
(52) Traveling in same direction while decelerating  
(53) Traveling in same direction with higher speed  
(54) Traveling in opposite direction  
(55) In crossover  
(56) Backing  
(59) Unknown travel direction of other motor vehicle in lane

**OTHER MOTOR VEHICLE ENCROACHING INTO LANE**

- (60) From adjacent lane (same direction)—over left lane line  
(61) From adjacent lane (same direction)—over right lane line  
(62) From opposite direction—over left lane line  
(63) From opposite direction—over right lane line  
(64) From parking lane  
(65) From crossing street, turning into same direction  
(66) From crossing street, across path  
(67) From crossing street, turning into opposite direction  
(68) From crossing street, intended path not known  
(70) From driveway, turning into same direction  
(71) From driveway, across path  
(72) From driveway, turning into opposite direction  
(73) From driveway, intended path not known  
(74) From entrance to limited access highway  
(78) Encroachment by other vehicle—details unknown

**PEDESTRIAN, PEDALCYCLIST, OR OTHER NONMOTORIST**

- (80) Pedestrian in roadway  
(81) Pedestrian approaching roadway  
(82) Pedestrian—unknown location  
(83) Pedalcyclist or other nonmotorist in roadway

(specify): \_\_\_\_\_

- (84) Pedalcyclist or other nonmotorist approaching roadway, (specify): \_\_\_\_\_

- (85) Pedalcyclist or other nonmotorist—unknown location

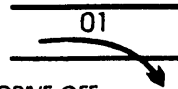
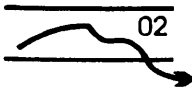
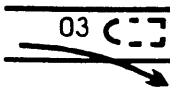
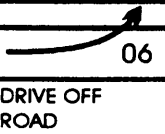
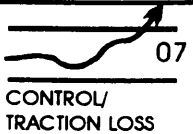
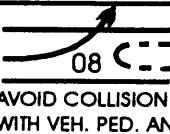

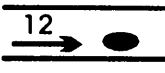
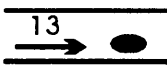
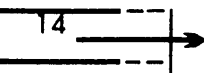
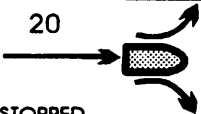
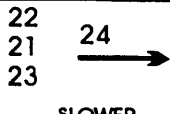
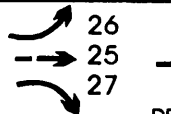
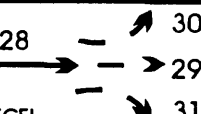

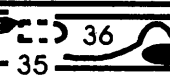
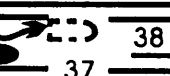
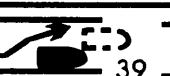
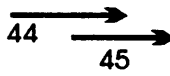



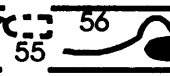
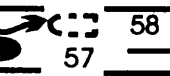


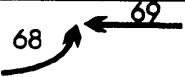

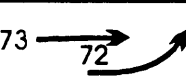
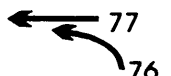
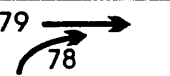
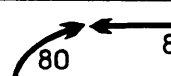
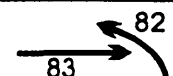
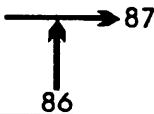
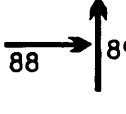
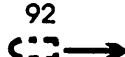
(specify): \_\_\_\_\_

**OBJECT OR ANIMAL**

- (87) Animal in roadway  
(88) Animal approaching roadway  
(89) Animal—unknown location  
(90) Object in roadway  
(91) Object approaching roadway  
(92) Object—unknown location  
(98) Other critical precrash event (specify): \_\_\_\_\_

- (99) Unknown



Category	Configuration	ACCIDENT TYPES (Includes Intent)					
I Single driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH. PED. ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B. Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH. PED. ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C. Forward Impact	 11 PARKED VEHICLE	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D. Rear-End	 20 STOPPED 21,22,23	 22 21 23 SLOWER 25,26,27	 24 26 25 27 DECEL 29,30,31	 28 30 29 31 (EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN	
	E. Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 35 CONTROL/ TRACTION LOSS	 38 37 AVOID COLLISION WITH VEHICLE	 40 39 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe/ Angle	 44 45	 46 45 47	(EACH • 48) SPECIFICS OTHER		(EACH • 49) SPECIFICS UNKNOWN	
III Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER		(EACH • 53) SPECIFICS UNKNOWN		
	H. Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 55 CONTROL/ TRACTION LOSS	 58 57 AVOID COLLISION WITH VEHICLE	 60 59 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe/ Angle	 64 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER		(EACH • 67) SPECIFICS UNKNOWN		
IV Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTION	 73 72	(EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN	
	K. Turn Into Path	 77 76 TURN INTO SAME DIRECTION	 79 78	 80 81 TURN INTO OPPOSITE DIRECTION	 82 83	(EACH • 84) SPECIFICS OTHER	(EACH • 85) SPECIFICS UNKNOWN
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	 86 87	 88 89	(EACH • 90) SPECIFICS OTHER		(EACH • 91) SPECIFICS UNKNOWN	
VI Miscellaneous	M. Backing Etc.	 92 BACKING VEHICLE	93 OTHER VEHICLE OR OBJECT		98 Other Accident Type 99 Unknown Accident Type 00 No impact		

33. Attempted Avoidance Maneuver 1 0

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify): \_\_\_\_\_

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify): \_\_\_\_\_

(9) Precrash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

36. Accident Type 09

(Note: Applicable codes on back of this page)

(00) No impact

Code the number of the diagram that best describes the accident circumstance

(98) Other accident type (specify): \_\_\_\_\_

(99) Unknown

**STOP HERE IF GV07 DOES NOT EQUAL 01 - 49**

**OCCUPANT RELATED**

37. Driver Presence in Vehicle \_\_\_\_\_  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
38. Number of Occupants This Vehicle \_\_\_\_\_  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
39. Number of Occupant Forms Submitted \_\_\_\_\_

**AIR BAG RELATED**

40. Is this an AOPS Vehicle? \_\_\_\_\_  
 (0) No (includes unknown)  
 (1) Yes - researcher determined  
 (2) VIN determined air bag system  
 (3) VIN determined automatic (passive) belts  
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal \_\_\_\_\_  
 (0) Not equipped or not available  
 (1) No air bags deployed  
*Single Air Bag Vehicle*  
 (2) Driver air bag deployed  
 (3) Driver air bag, unknown if deployed  
*Multiple Air Bag Vehicle*  
 (4) Driver side only deployed  
 (5) Passenger side only deployed  
 (6) Driver and passenger side deployed  
 (7) Driver and passenger side unknown if deployed  
 (8) Air bag(s) deployed, details unknown  
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal \_\_\_\_\_  
 (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown
- Specify type of "other" air bag present: \_\_\_\_\_

**VEHICLE WEIGHT ITEMS**

43. Vehicle Curb Weight \_\_\_\_\_ 0  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (045) Less than 454 kilograms  
 (612) 6,124 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_

44. Vehicle Cargo Weight \_\_\_\_\_ 0  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (454) 4,536 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_

**ROLLOVER DATA**

45. Rollover \_\_\_\_\_  
 (00) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (01-16) Code the number of quarter turns  
 (17) Rollover, 17 or more quarter turns (specify): \_\_\_\_\_  
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type \_\_\_\_\_  
 (00) No rollover  
 (01) Trip-over  
 (02) Flip-over  
 (03) Turn-over  
 (04) Climb-over  
 (05) Fall-over  
 (06) Bounce-over  
 (07) Collision with another vehicle  
 (08) Other rollover initiation type specify: \_\_\_\_\_  
 (98) Rollover--end-over-end  
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation \_\_\_\_\_  
 (0) No rollover  
 (1) On roadway  
 (2) On shoulder--paved  
 (3) On shoulder--unpaved  
 (4) On roadside or divided trafficway median  
 (8) Rollover--end-over-end  
 (9) Unknown
48. Rollover Initiation Object Contacted \_\_\_\_\_  
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied \_\_\_\_\_  
 (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (6) Non-contact rollover forces (specify): \_\_\_\_\_  
 (8) Rollover--end-over-end  
 (9) Unknown
50. Direction of Initial Roll \_\_\_\_\_  
 (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (8) Rollover--end-over-end  
 (9) Unknown roll direction



## CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

### Noncollision

- (31) Turn-over — fall-over
- (32) No rollover impact initiation (end-over-end)
- (34) Jackknife

### Collision With Fixed Object

- (41) Tree ( $\leq 10$  cm in diameter)
- (42) Tree ( $> 10$  cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

### Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 10$  cm in diameter)
- (51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)
- (52) Pole or post ( $> 30$  cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)  
(specify): \_\_\_\_\_

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): \_\_\_\_\_

- (69) Unknown fixed object \_\_\_\_\_

### Collision with Nonfixed Object

- (70) Passenger car, light truck, van, or other vehicle not in-transport
- (71) Medium/heavy truck or bus not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (79) Object fell from vehicle in-transport
- (88) Other nonfixed object (specify): \_\_\_\_\_

- (89) Unknown nonfixed object \_\_\_\_\_

- (98) Other event (specify): \_\_\_\_\_

- (99) Unknown event or object \_\_\_\_\_

**VERRIDE/UNDERRIDE (THIS VEHICLE)**

51. Front Override/Underride (this Vehicle) \_\_\_\_\_

52. Rear Override/Underride (this Vehicle) \_\_\_\_\_

(0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride

*Override (see specific CDC)*

*[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]*

(1) 1st CDC

(2) 2nd CDC

(3) Other not automated CDC (specify): \_\_\_\_\_

*Underride (see specific CDC)*

*[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]*

(4) 1st CDC

(5) 2nd CDC

(6) Other not automated CDC (specify): \_\_\_\_\_

(7) Medium/heavy truck or bus override (of any configuration)

(9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value

(996) Non-horizontal impact

(997) Noncollision

(998) Impact with object

(999) Unknown

53. Heading Angle For This Vehicle \_\_\_\_\_

54. Heading Angle For Other Vehicle \_\_\_\_\_

**RECONSTRUCTION DATA**

55. Towed Trailing Unit \_\_\_\_\_

(0) No towed unit

(1) Yes—towed trailing unit

(9) Unknown

56. Documentation of Trajectory Data for This Vehicle \_\_\_\_\_

(0) No

(1) Yes

57. Post Collision Condition of Tree or Pole (For Highest Delta V) \_\_\_\_\_

(0) Not collision (for highest delta V) with tree or pole

(1) Not damaged

(2) Cracked/sheared

(3) Tilted < 45 degrees

(4) Tilted ≥ 45 degrees

(5) Uprooted tree

(6) Separated pole from base

(7) Pole replaced

(8) Other (specify): \_\_\_\_\_

(9) Unknown

**ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V**

58. Basis for Total (Resultant) Delta V (highest) \_\_\_\_\_

(00) No vehicle inspection

*Delta V Calculated*

(01) Reconstruction program-damage only routine

(02) Reconstruction program-damage and trajectory routine

(03) Missing vehicle algorithm

*Delta V Not Calculated*

(04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

*All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.*

(05) Rollover

(06) Other non-horizontal forces

(07) Sideswipe type damage

(08) Severe override

(09) Yielding object

(10) Overlapping damage

(11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify): \_\_\_\_\_

(98) Other, (specify): \_\_\_\_\_

## COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V \_\_\_\_\_ Highest

\_\_\_\_\_ Nearest kmph (highest)  
 \_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown

60. Longitudinal Component of Delta V \_\_\_\_\_ + \_\_\_\_\_ Highest  
 \_\_\_\_\_ - \_\_\_\_\_

\_\_\_\_\_ Nearest kmph (highest)  
 \_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than  
 -0.5 kmph and less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_\_999) Unknown

61. Lateral Component of Delta V \_\_\_\_\_ + \_\_\_\_\_ Highest  
 \_\_\_\_\_ - \_\_\_\_\_

\_\_\_\_\_ Nearest kmph (highest)  
 \_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than -0.5 kmph and  
 less than +0.5 kmph)  
 (±160) ±159.5 kmph and above  
 (\_\_999) Unknown

62. Energy Absorption \_\_\_\_\_ Highest  
 \_\_\_\_\_, \_\_\_\_\_ 0 0

\_\_\_\_\_ Nearest 100 joules (highest)  
 \_\_\_\_\_ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)  
 (9997) 999,650 joules or more  
 (9999) Unknown

63. Impact Speed \_\_\_\_\_ Highest

\_\_\_\_\_ Nearest kmph (highest)  
 \_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means  
 less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (998) Trajectory algorithm not run  
 (999) Unknown

## DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program  
 Results (For Highest Delta V) \_\_\_\_\_

- (0) No reconstruction
- (1) Collision fits model — results appear reasonable
- (2) Collision fits model — results appear high
- (3) Collision fits model — results appear low
- (4) Borderline reconstruction — results appear reasonable

## OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed \_\_\_\_\_ Highest

\_\_\_\_\_ Nearest kmph (highest)  
 \_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means  
 less than 0.5 kmph)  
 (160) 159.5 kmph and above  
 (999) Unknown



ESTIMATED DELTA V	INSPECTION TYPE
66. Estimated Highest Delta V (Researcher Determined) _____ (0) Reconstruction Delta V coded  <i>Estimated Delta V</i> (1) Less than 10 kmph (2) ≥ 10 kmph but < 25 kmph (3) ≥ 25 kmph but < 40 kmph (4) ≥ 40 kmph but < 55 kmph (5) ≥ 55 kmph  <i>Other estimates of damage severity</i> (6) Minor (7) Moderate (8) Severe  (9) Unknown	67. Type of Vehicle Inspection _____ (0) No inspection (1) Vehicle fully repaired-no damage evident (2) Partial inspection (specify): _____ (3) Complete inspection  <b>DELTA V EVENT NUMBER</b>  68. Delta V Event Number _____ _____ Code the accident event sequence number that resulted in the Delta V that has been coded above for this vehicle (99) Unknown

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67 = 0), \*\*\*

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.



**NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM**

1. Primary Sampling Unit Number _____		3. Vehicle Number <u>01</u>	
2. Case Number - Stratum <u>DS1-95-5B020</u>			

VIN 1GDK6P1B3FYXXXXXX Model Year 85  
Vehicle Make (specify): GMC Vehicle Model (specify): BLUE BIRD SCHOOL BUS

Locate the end of the damage with respect to the vehicle's damaged center point or bumper corner for end impacts or an undamaged axle for side impacts.			
Specific Impact No.	Location of Direct Damage	Location of Field L	Location of Max Crush
Ø1	BEGINS 480cm FROM FRONT AXLE	BEGINS 335cm FROM FRONT AXLE	C6
Ø2	UEW	UEW	RR BUMPER CORNER

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

**Use as many lines/columns as necessary to describe each damage profile.**

[illegible]

# ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	<u>277.0</u>	inches	x	2.54	=	<u>709</u>	cm
Overall Length	<u>433.0</u>	inches	x	2.54	=	<u>1100</u>	cm
Maximum Width	<u>096.0</u>	inches	x	2.54	=	<u>244</u>	cm
Curb Weight	<u>N/A</u>	pounds	x	.4536	=	<u>N/A</u>	kg
Average Track	<u>N/A</u>	inches	x	2.54	=	<u>N/A</u>	cm
Front Overhang	<u>030.0</u>	inches	x	2.54	=	<u>076</u>	cm
Rear Overhang	<u>126.0</u>	inches	x	2.54	=	<u>050</u>	cm
Undeformed End Width	<u>N/A</u>	inches	x	2.54	=	<u>N/A</u>	cm
Engine Size: cyl./displ.	<u>6000</u>	cc	x	.001	=	<u>6.0</u>	L
	<u>366</u>	CID	x	.0164	=	<u>6.0</u>	L



CASE NUMBER DS9520

# MISSING DATA

THE FOLLOWING DATA ARE NOT INCLUDED IN THIS CASE:

PAGE NUMBER(S)

2

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### DAMAGE DESCRIPTION

#### Tire—Wheel Damage

Rotation physically restricted

RF 2 For rear wheels  
LF 2 circle axle(s)  
RR 2 2 3  
LR 2

(1) Yes, (2) No, (8) NA, (9) Unk.

### TYPE OF TRANSMISSION

\_\_\_ Manual \_\_\_ Automatic

Front Track: 201.00

Cab Width: 231.00

Curb Weight: \_\_\_\_\_

Overall Length: \_\_\_\_\_

Engine Size: cyl. \_\_\_\_\_

displ. \_\_\_\_\_

### WHEEL STEER ANGLES

(For locked front wheels or displaced rear axles only)

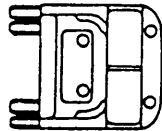
RF ± \_\_\_\_\_° For rear wheels  
LF ± \_\_\_\_\_° circle axle(s)

RR ± \_\_\_\_\_° 2 3

LR ± \_\_\_\_\_°

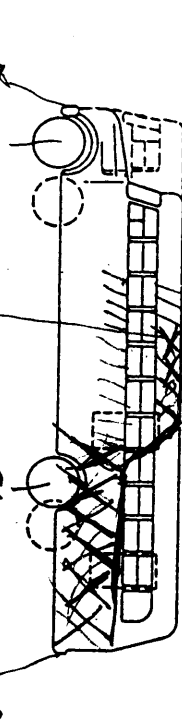
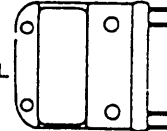
Within ± 5 degrees

Vehicle No.: 1



FRONT  
CONVENTIONAL

FRONT  
FORWARD CONTROL



SEAT 1-12

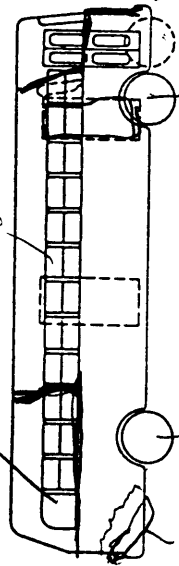
CM	IN
4.4	1.75
11.4	4.5
20.3	8.0
30.5	12.0
33.0	13.0
33.0	13.0
35.6	14.0
25.4	10.0
24.1	9.5
20.3	8.0
27.9	11.0
30.5	12.0



ROOF  
TORN OFF

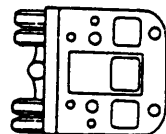
LATCH  
CUSH  
IMPACT  
#2

REAR  
FLOOR  
BUCKLED



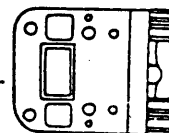
DOOR BEGINS  
157 ENDS  
24 CM

NOTE REAR  
PORTION OF BUS  
HAD BEEN PULLED  
BACK ON BUS  
AFTER  
ACC.



REAR  
CONVENTIONAL

REAR  
FORWARD CONTROL



Note: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewall, etc.)

If pulling trailer sketch truck or trailer and damage received on rear of truck.

Annotate any tires which are deflated due to damage on the vehicle.

Annotate any tires which are deflated due to damage on the vehicle.

**CODES FOR OBJECT CONTACTED**

(75)	Vehicle occupant
(76)	Animal
(77)	Train
(78)	Trailer, disconnected in transport
(79)	Object fell from vehicle in-transport
(88)	Other nonfixed object (specify):
(89)	Unknown nonfixed object
(98)	Other event (specify):
(99)	Unknown event or object

[illegible]



**COLLISION DEFORMATION CLASSIFICATION****HIGHEST DELTA "V"**

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. _____	5. _____	6. _____	7. _____	8. _____	9. _____	10. _____	11. _____

**Second Highest Delta "V"**

12. _____	13. _____	14. _____	15. _____	16. _____	17. _____	18. _____	19. _____
-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

**CRUSH PROFILE IN CENTIMETERS**

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

**HIGHEST DELTA "V"**

20. _____ L	21. _____ C <sub>1</sub>	_____ C <sub>2</sub>	_____ C <sub>3</sub>	_____ C <sub>4</sub>	_____ C <sub>5</sub>	_____ C <sub>6</sub>	22. _____ ± D
							+ _____ = _____

**Second Highest Delta "V"**

23. _____ L	24. _____ C <sub>1</sub>	_____ C <sub>2</sub>	_____ C <sub>3</sub>	_____ C <sub>4</sub>	_____ C <sub>5</sub>	_____ C <sub>6</sub>	25. _____ ± D
							+ _____ = _____

26. Undeformed End Width  
(Coded when highest severity impact is an end plane impact.) \_\_\_\_\_  
\_\_\_\_\_ Code to the nearest centimeter  
(250) 250 centimeters or more  
(998) No highest severity end plane impact  
(999) Unknown

27. Direct Damage Width  
(For highest severity impact) \_\_\_\_\_  
\_\_\_\_\_ Code to the nearest centimeter  
(250) 250 centimeters or more  
(999) Unknown

28. Original Wheelbase  
\_\_\_\_\_ Code to the nearest centimeter  
(650) 650 centimeters or more  
(999) Unknown  
\_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

29. Original Average Track Width  
\_\_\_\_\_ Code to the nearest centimeter  
(185) 185 centimeters or more  
(999) Unknown  
\_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

## FUEL SYSTEM

30. Are CDCs Documented  
but Not Coded on The  
Automated File?

- (0) No  
(1) Yes

31. Researcher's Assessment of Vehicle  
Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

32. Is This A Multi-Stage Manufactured Vehicle  
And/Or A Certified Altered Vehicle?

- (0) No post manufacturer modifications  
(1) Yes - post manufacturer modifications

(specify): BLUE BIRD  
SCHOOL BUS CHASSIS

(Include photograph of CERTIFICATION  
PLACARD in case report)

- (9) Unknown if vehicle is modified

## FIRE OCCURRENCE

33. Fire Occurrence

- (0) No fire

Yes, fire occurred

- (1) Minor  
(2) Major  
(9) Unknown

34. Origin of Fire

- (0) No fire  
(1) Vehicle exterior (front, side, back, top)  
(2) Exhaust system  
(3) Fuel tank (and other fuel retention  
system parts)  
(4) Engine compartment  
(5) Cargo/trunk compartment  
(6) Instrument panel  
(7) Passenger compartment area  
(8) Other location (specify):

- (9) Unknown

35. Location of Fuel Tank-1 Filler Cap

36. Location of Fuel Tank-2 Filler Cap

- (0) No fuel tank  
(1) On back plane  
(2) Aft of center of the rear wheels (rear axle) on  
left side plane  
(3) Aft of center of the rear wheels (rear axle) on  
right side plane  
(4) Forward of center of the rear wheels (rear  
axle) on left side plane  
(5) Forward of center of the rear wheels (rear  
axle) on right side plane  
(6) Over the center of the rear wheels (rear axle)  
on left side plane  
(7) Over the center of the rear wheels (rear axle)  
on right side plane  
(8) Other (specify):  
(9) Unknown

37. Type of Fuel Tank-1

38. Type of Fuel Tank-2

- (0) No fuel tank (electrical vehicle)  
(1) Metallic  
(2) Non-metallic  
(9) Unknown

39. Location of Fuel Tank-1

40. Location of Fuel Tank-2

- (0) No fuel tank  
(1) Aft of center of the rear wheels (rear axle)  
centered  
(2) Aft of center of the rear wheels (rear axle) left  
side  
(3) Aft of center of the rear wheels (rear axle)  
right side  
(4) Forward of center of the rear wheels (rear  
axle) centered  
(5) Forward of center of the rear wheels (rear  
axle) left side  
(6) Forward of center of the rear wheels (rear  
axle) right side  
(7) Over center of the rear wheels (rear axle)  
(8) Other (specify):  
(9) Unknown

41. Damage to Fuel Tank-1

42. Damage to Fuel Tank-2

- (0) No fuel tank  
(1) No damage to fuel tank  
(2) Deformed, no seam failure  
(3) Deformed, with a seam failure  
(4) Punctured  
(5) Lacerated (ripped)  
(6) Abraded (scraped)  
(7) Filler neck separation from the fuel tank  
(8) Other damage (specify):  
(9) Unknown



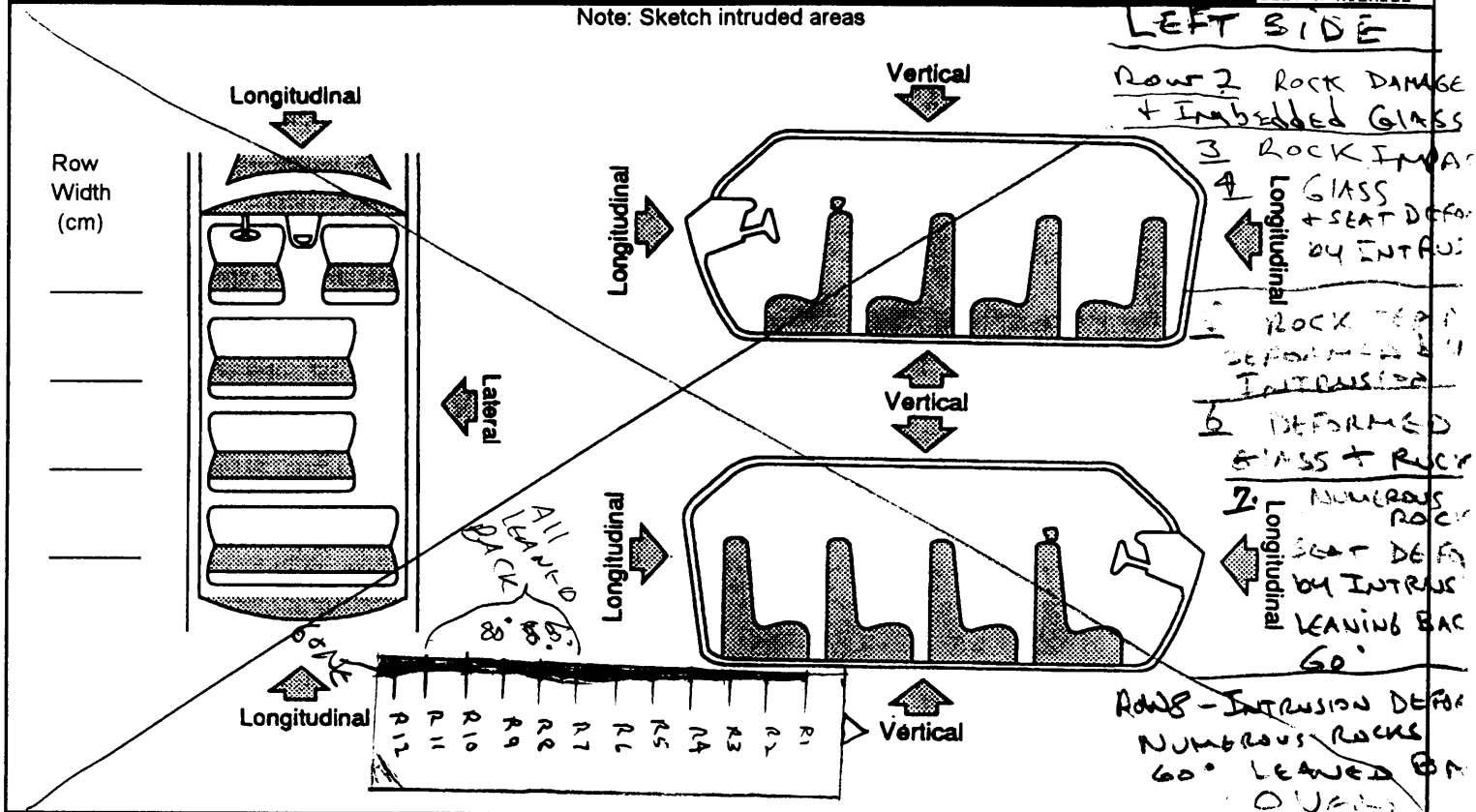


## INTRUSION WORKSHEET

BEST AVAILABLE

Note: Sketch intruded areas

LEFT SIDE



LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters)			DOMINANT CRUSH DIRECTION
		COMPARISON VALUE	INTRUDED VALUE	INTRUSION	
① SIDE ROW 1 (L)	SIDE PANEL	Ø	4.4	= 4.4 CM	3 (LAT.)
Row 2 (L)	SIDE PANEL		11.4	= 11.4 CM	3
Row 3 (L)	SIDE PANEL		20.3	= 20.3 CM	3
Row 4 (L)	SIDE PANEL		30.5	= 30.5 CM	3
Row 5 (L)	SIDE PANEL		33.0	= 33.0 CM	3
Row 6 (L)	SIDE PANEL		33.0	= 33.0 CM	3
Row 7 (L)	SIDE PANEL		35.6	= 35.6 CM	3
Row 8 (L)	SIDE PANEL		25.4	= 25.4 CM	3
Row 9 (L)	SIDE PANEL		24.1	= 24.1 CM	3
Row 10 (L)	SIDE PANEL		20.3	= 20.3 CM	3
Row 11 (L)	SIDE PANEL		27.9	= 27.9 CM	3
Row 12 (L)	SIDE PANEL	Ø	30.5	= 30.5 CM	3
			-	=	3
			-	=	
			-	=	

CASE NUMBER DS9520

# MISSING DATA

THE FOLLOWING DATA ARE NOT INCLUDED IN THIS CASE:

PAGE NUMBER(S)

7-11

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## EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No ☐ Yes ☒

Describe indications of ejection and body parts involved in partial ejection(s):

PART OF ROOF OF SCHOOL BUS WAS RIPPED AWAY AND ENTIRE BACK SECTION OF BUS SEPERATED FROM CHASSIS AT IMPACT W/ SCHL. BUS LEFT REAR SEAT-ROW 12 (LAST SEAT) WAS RIPPED COMPLETELY OUT OF BUS W/OCCUPANT

Occupant Number	27					
Ejection	1					
(Note on Vehicle Interior Sketch) Ejection Area	4					
Ejection Medium	5					
Medium Status	3					

## Ejection

- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, Unknown degree
- (9) Unknown

## Ejection Area

- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear

## (7) Roof

- (8) Other area (e.g., back of pickup, etc.) (specify):

- (9) Unknown

## Ejection Medium

- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify):

## (5) Integral structure

- (8) Other medium (specify):

- (9) Unknown

## Medium Status (Immediately Prior to Impact)

- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

ENTRAPMENT No ☐ Yes ☐

Describe entrapment mechanism:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Component(s):

\_\_\_\_\_  
 \_\_\_\_\_

(Note in vehicle interior diagram)



# GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

DSI-95-SB-020

3. Vehicle Number

02

## VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year  
(99) Unknown

87

5. Vehicle Make (specify):

KENWORTH

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

85

6. Vehicle Model (specify):

TRUCK 6K4

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

881

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

63

8. Vehicle Identification Number

2NKC L20X9HM \*\*\*\*\*

Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros  
Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

0

## OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

1

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

050

31 mph X 1.6093 = 050 kmph

12. Speed Limit

- (000) No statutory limit  
Code posted or statutory speed limit in kmph  
(999) Unknown

064

40 mph X 1.6093 = 064 kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present  
(1) Yes alcohol present  
(7) Not reported  
(8) No driver present  
(9) Unknown

0

14. Alcohol Test Result For Driver

- Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

96

Source:

PAR

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present  
(1) Yes other drug(s) present  
(7) Not reported  
(8) No driver present  
(9) Unknown

0

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given  
(1) Drug(s) not found in specimen  
(2) Drug(s) found in specimen, (specify):  
(3) Specimen test given, results unknown or not  
obtained  
(8) No driver present  
(9) Unknown if specimen test given

0

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories

Code actual 5-digit zip code  
(99998) No driver present  
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(7) Other (specify):  
(8) No driver present  
(9) Unknown

1



# CODES FOR BODY TYPE

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): \_\_\_\_\_
- (09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,536$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Larado, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,536$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ( $\leq 4,536$  kgs GVWR)
- (23) Van based motorhome ( $\leq 4,536$  kgs GVWR)
- (24) Van based school bus ( $\leq 4,536$  kgs GVWR)
- (25) Van based other bus ( $\leq 4,536$  kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): \_\_\_\_\_
- (29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,536$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)
- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,536$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): \_\_\_\_\_
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,536$ kgs GVWR)

- (60) Step van ( $> 4,536$  kgs GVWR)
- (61) Single unit straight truck ( $4,536 \text{ kgs} < \text{GVWR} \leq 8,845 \text{ kgs}$ )
- (62) Single unit straight truck ( $8,845 \text{ kgs} < \text{GVWR} \leq 11,793 \text{ kgs}$ )
- (63) Single unit straight truck ( $> 11,793 \text{ kgs GVWR}$ )
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): \_\_\_\_\_
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2

- (0) Non-interchange area and non-junction  
 (1) Interchange area related

*Non-Interchange junctions*

- (2) Intersection related  
 (3) Driveway, alley access related  
 (4) Other junction (specify) \_\_\_\_\_

(5) \_\_\_\_\_  
 Unknown type of junction

(9) Unknown

20. Trafficway Flow Ø

- (0) Not physically divided (two way traffic)  
 (1) Divided trafficway-median strip without positive barrier  
 (2) Divided trafficway-median strip with positive barrier  
 (3) One way traffic  
 (9) Unknown

21. Number Of Travel Lanes 2

- (1) One  
 (2) Two  
 (3) Three  
 (4) Four  
 (5) Five  
 (6) Six  
 (7) Seven or more  
 (9) Unknown

22. Roadway Alignment 1

- (1) Straight  
 (2) Curve right  
 (3) Curve left  
 (9) Unknown

23. Roadway Profile 1

- (1) Level  
 (2) Uphill grade (> 2%)  
 (3) Hill crest  
 (4) Downhill grade (> 2%)  
 (5) Sag  
 (9) Unknown

24. Roadway Surface Type 2

- (1) Concrete  
 (2) Bituminous (asphalt)  
 (3) Brick or block  
 (4) Slag, gravel, or stone  
 (5) Dirt  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

25. Roadway Surface Condition 1

- (1) Dry  
 (2) Wet  
 (3) Snow or slush  
 (4) Ice  
 (5) Sand, dirt, or oil  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

26. Light Conditions 1

- (1) Daylight  
 (2) Dark  
 (3) Dark, but lighted  
 (4) Dawn  
 (5) Dusk  
 (9) Unknown

27. Atmospheric Conditions Ø

- (0) No adverse atmospheric-related driving conditions  
 (1) Rain  
 (2) Sleet/hail  
 (3) Snow  
 (4) Fog  
 (5) Rain and fog  
 (6) Sleet and fog  
 (7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): \_\_\_\_\_  
 (9) Unknown

28. Traffic Control Device 2

- (0) No traffic control(s)  
 (1) Traffic control signal (not RR crossing)

*Regulatory*

- (2) Stop sign  
 (3) Yield sign  
 (4) School zone sign  
 (5) Other regulatory sign (specify): \_\_\_\_\_

- (6) Warning sign (not RR crossing)  
 (7) Unknown sign  
 (8) Miscellaneous/other controls including RR controls (specify): \_\_\_\_\_

(9) Unknown

29. Traffic Control Device Functioning 2

- (0) No traffic control device  
 (1) Traffic control device not functioning (specify): \_\_\_\_\_  
 (2) Traffic control device functioning properly  
 (9) Unknown

**PRECRASH DRIVER RELATED DATA****30. Driver's Distraction/Inattention To Driving** 0 /  
(Prior To Recognition Of Critical Event)

- (00) No driver present  
 (01) Attentive or not distracted  
 (02) Looked but did not see

*Distractions*

(03) By other occupant(s), (specify): \_\_\_\_\_

(04) By moving object in vehicle (specify): \_\_\_\_\_

(05) While talking or listening to cellular phone (specify location and type of phone): \_\_\_\_\_

(06) While dialing cellular phone (specify location and type of phone): \_\_\_\_\_

(07) While adjusting climate controls

(08) While adjusting radio, cassette, CD (specify): \_\_\_\_\_

(09) While using other device/controls integral to vehicle (specify): \_\_\_\_\_

(10) While using or reaching for device/object brought into vehicle (specify): \_\_\_\_\_

(11) Sleepy or fell asleep

(12) Distracted by outside person, object, or event (specify): \_\_\_\_\_

(13) Eating or drinking

(14) Smoking related

(97) Distracted/inattentive, details unknown

(98) Other, distraction (specify): \_\_\_\_\_

(99) Unknown

**31. Pre-Event Movement** 0 /  
(Prior to Recognition of Critical Event)

- (00) No driver present  
 (01) Going straight  
 (02) Decelerating in traffic lane  
 (03) Accelerating in traffic lane  
 (04) Starting in traffic lane  
 (05) Stopped in traffic lane  
 (06) Passing or overtaking another vehicle  
 (07) Disabled or parked in travel lane  
 (08) Leaving a parking position  
 (09) Entering a parking position  
 (10) Turning right  
 (11) Turning left  
 (12) Making a U-turn  
 (13) Backing up (other than for parking position)  
 (14) Negotiating a curve  
 (15) Changing lanes  
 (16) Merging  
 (17) Successful avoidance maneuver to a previous critical event  
 (97) Other (specify): \_\_\_\_\_  
 (99) Unknown

**32. Critical Precrash Event** 17**THIS VEHICLE LOSS OF CONTROL DUE TO:**

- (01) Blow out or flat tire  
 (02) Stalled engine  
 (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_  
 (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_  
 (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_  
 (06) Traveling too fast for conditions  
 (08) Other cause of control loss (specify): \_\_\_\_\_  
 (09) Unknown cause of control loss

**THIS VEHICLE TRAVELLING**

- (10) Over the lane line on left side of travel lane  
 (11) Over the lane line on right side of travel lane  
 (12) Off the edge of the road on the left side  
 (13) Off the edge of the road on the right side  
 (14) End departure  
 (15) Turning left at intersection  
 (16) Turning right at intersection  
 (17) Crossing over (passing through) intersection  
 (18) This vehicle decelerating  
 (19) Unknown travel direction

**OTHER MOTOR VEHICLE IN LANE**

- (50) Other vehicle stopped  
 (51) Traveling in same direction with lower steady speed  
 (52) Traveling in same direction while decelerating  
 (53) Traveling in same direction with higher speed  
 (54) Traveling in opposite direction  
 (55) In crossover  
 (56) Backing  
 (59) Unknown travel direction of other motor vehicle in lane

**OTHER MOTOR VEHICLE ENCROACHING INTO LANE**

- (60) From adjacent lane (same direction)—over left lane line  
 (61) From adjacent lane (same direction)—over right lane line  
 (62) From opposite direction—over left lane line  
 (63) From opposite direction—over right lane line  
 (64) From parking lane  
 (65) From crossing street, turning into same direction  
 (66) From crossing street, across path  
 (67) From crossing street, turning into opposite direction  
 (68) From crossing street, intended path not known  
 (70) From driveway, turning into same direction  
 (71) From driveway, across path  
 (72) From driveway, turning into opposite direction  
 (73) From driveway, intended path not known  
 (74) From entrance to limited access highway  
 (78) Encroachment by other vehicle—details unknown

**PEDESTRIAN, PEDALCYCLIST, OR OTHER NONMOTORIST**

- (80) Pedestrian in roadway  
 (81) Pedestrian approaching roadway  
 (82) Pedestrian—unknown location  
 (83) Pedalcyclist or other nonmotorist in roadway

(specify): \_\_\_\_\_

(84) Pedalcyclist or other nonmotorist approaching roadway, (specify): \_\_\_\_\_

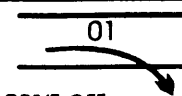
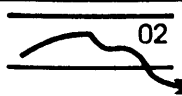
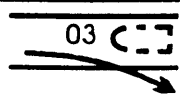
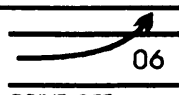
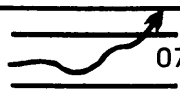
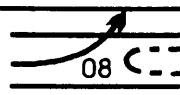

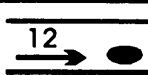
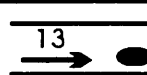
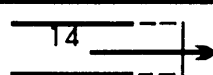
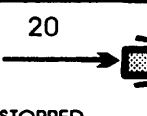
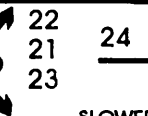
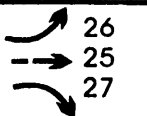

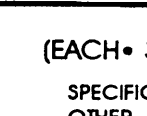


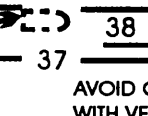
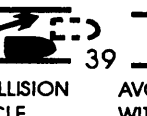
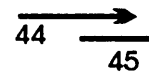
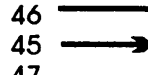

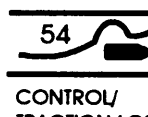
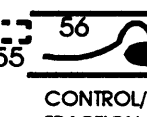
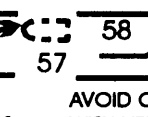



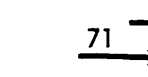
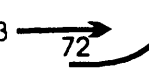
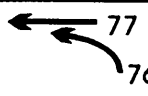
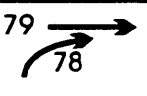
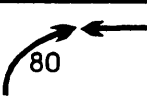
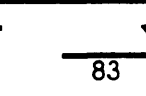
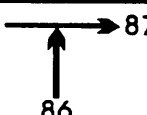
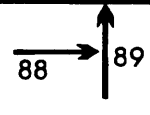
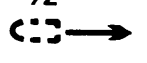
(85) Pedalcyclist or other nonmotorist—unknown location

(specify): \_\_\_\_\_

**OBJECT OR ANIMAL**

- (87) Animal in roadway  
 (88) Animal approaching roadway  
 (89) Animal—unknown location  
 (90) Object in roadway  
 (91) Object approaching roadway  
 (92) Object—unknown location  
 (98) Other critical precrash event (specify): \_\_\_\_\_

(99) Unknown

Category	Configur- ation	ACCIDENT TYPES (Includes intent)					
I Single driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH. PED. ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN	
	B. Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH. PED. ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN	
	C. Forward Impact	 11 PARKED VEHICLE	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D. Rear-End	 20 STOPPED 21,22,23	 22 SLOWER 25,26,27	 24 DECEL 29,30,31	 26 (EACH • 32) SPECIFICS OTHER	 28 (EACH • 33) SPECIFICS UNKNOWN	
	E. Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEHICLE	 39 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe/ Angle	 44 (EACH • 48) SPECIFICS OTHER	 46 (EACH • 49) SPECIFICS UNKNOWN				
III Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER		(EACH • 53) SPECIFICS UNKNOWN		
	H. Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEHICLE	 59 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe/ Angle	 64 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER		(EACH • 67) SPECIFICS UNKNOWN		
IV Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 70 INITIAL SAME DIRECTION	 72 (EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN		
	K. Turn Into Path	 76 TURN INTO SAME DIRECTION	 78 (EACH • 84) SPECIFICS OTHER	 80 TURN INTO OPPOSITE DIRECTION	 82 (EACH • 85) SPECIFICS UNKNOWN		
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	 86 (EACH • 90) SPECIFICS OTHER	 88 (EACH • 91) SPECIFICS UNKNOWN				
VI. Miscel- laneous	M. Backing Etc.	 92 BACKING VEHICLE	93 OTHER VEHICLE OR OBJECT	98 Other Accident Type 99 Unknown Accident Type 00 No impact			



33. Attempted Avoidance Maneuver 99

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify):

(9) Preocrash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

36. Accident Type 88

(Note: Applicable codes on back of this page)

(00) No impact

Code the number of the diagram that best describes the accident circumstance

(98) Other accident type (specify):

(99) Unknown

**STOP HERE IF GV07 DOES NOT EQUAL 01 - 49**

**OCCUPANT RELATED**

37. Driver Presence in Vehicle \_\_\_\_\_  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
38. Number of Occupants This Vehicle \_\_\_\_\_  
 (00-96) Code actual number of occupants for this vehicle  
 (97) 97 or more  
 (99) Unknown
39. Number of Occupant Forms Submitted \_\_\_\_\_

**AIR BAG RELATED**

40. Is this an AOPS Vehicle? \_\_\_\_\_  
 (0) No (includes unknown)  
 (1) Yes - researcher determined  
 (2) VIN determined air bag system  
 (3) VIN determined automatic (passive) belts  
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal \_\_\_\_\_  
 (0) Not equipped or not available  
 (1) No air bags deployed
- Single Air Bag Vehicle*  
 (2) Driver air bag deployed  
 (3) Driver air bag, unknown if deployed
- Multiple Air Bag Vehicle*  
 (4) Driver side only deployed  
 (5) Passenger side only deployed  
 (6) Driver and passenger side deployed  
 (7) Driver and passenger side unknown if deployed  
 (8) Air bag(s) deployed, details unknown  
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal \_\_\_\_\_  
 (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown

Specify type of "other" air bag present: \_\_\_\_\_

**VEHICLE WEIGHT ITEMS**

43. Vehicle Curb Weight \_\_\_\_\_ 0  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (045) Less than 454 kilograms  
 (612) 6,124 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_

44. Vehicle Cargo Weight \_\_\_\_\_ 0  
 \_\_\_\_\_ Code weight to nearest 10 kilograms.  
 (000) Less than 5 kilograms  
 (454) 4,536 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_

**ROLLOVER DATA**

45. Rollover \_\_\_\_\_  
 (00) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (01-16) Code the number of quarter turns  
 (17) Rollover, 17 or more quarter turns (specify): \_\_\_\_\_  
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type \_\_\_\_\_  
 (00) No rollover  
 (01) Trip-over  
 (02) Flip-over  
 (03) Turn-over  
 (04) Climb-over  
 (05) Fall-over  
 (06) Bounce-over  
 (07) Collision with another vehicle  
 (08) Other rollover initiation type specify): \_\_\_\_\_  
 (98) Rollover--end-over-end  
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation \_\_\_\_\_  
 (0) No rollover  
 (1) On roadway  
 (2) On shoulder--paved  
 (3) On shoulder--unpaved  
 (4) On roadside or divided trafficway median  
 (8) Rollover--end-over-end  
 (9) Unknown
48. Rollover Initiation Object Contacted \_\_\_\_\_  
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied \_\_\_\_\_  
 (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (6) Non-contact rollover forces (specify): \_\_\_\_\_  
 (8) Rollover--end-over-end  
 (9) Unknown
50. Direction of Initial Roll \_\_\_\_\_  
 (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (8) Rollover--end-over-end  
 (9) Unknown roll direction

## CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

### Noncollision

- (31) Turn-over — fall-over
- (32) No rollover impact initiation (end-over-end)
- (34) Jackknife

### Collision With Fixed Object

- (41) Tree ( $\leq 10$  cm in diameter)
- (42) Tree ( $> 10$  cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

### Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 10$  cm in diameter)
- (51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)
- (52) Pole or post ( $> 30$  cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)  
(specify): \_\_\_\_\_

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): \_\_\_\_\_

- (69) Unknown fixed object \_\_\_\_\_

### Collision with Nonfixed Object

- (70) Passenger car, light truck, van, or other vehicle not in-transport
- (71) Medium/heavy truck or bus not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (79) Object fell from vehicle in-transport
- (88) Other nonfixed object (specify): \_\_\_\_\_

- (89) Unknown nonfixed object \_\_\_\_\_

- (98) Other event (specify): \_\_\_\_\_

- (99) Unknown event or object \_\_\_\_\_

**VERRIDE/UNDERRIDE (THIS VEHICLE)**

51. Front Override/Underride (this Vehicle) \_\_\_\_\_
52. Rear Override/Underride (this Vehicle) \_\_\_\_\_  
 (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride
- Override (see specific CDC)*  
*[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]*  
 (1) 1st CDC  
 (2) 2nd CDC  
 (3) Other not automated CDC (specify): \_\_\_\_\_
- Underride (see specific CDC)*  
*[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]*  
 (4) 1st CDC  
 (5) 2nd CDC  
 (6) Other not automated CDC (specify): \_\_\_\_\_
- (7) Medium/heavy truck or bus override (of any configuration)  
 (9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value  
 (996) Non-horizontal impact  
 (997) Noncollision  
 (998) Impact with object  
 (999) Unknown

53. Heading Angle For This Vehicle \_\_\_\_\_
54. Heading Angle For Other Vehicle \_\_\_\_\_

**RECONSTRUCTION DATA**

55. Towed Trailing Unit \_\_\_\_\_  
 (0) No towed unit  
 (1) Yes—towed trailing unit  
 (9) Unknown
56. Documentation of Trajectory Data for This Vehicle \_\_\_\_\_  
 (0) No  
 (1) Yes
57. Post Collision Condition of Tree or Pole (For Highest Delta V) \_\_\_\_\_  
 (0) Not collision (for highest delta V) with tree or pole  
 (1) Not damaged  
 (2) Cracked/sheared  
 (3) Tilted < 45 degrees  
 (4) Tilted ≥ 45 degrees  
 (5) Uprooted tree  
 (6) Separated pole from base  
 (7) Pole replaced  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

**ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V**

58. Basis for Total (Resultant) Delta V (highest) \_\_\_\_\_

(00) No vehicle inspection

*Delta V Calculated*

- (01) Reconstruction program-damage only routine  
 (02) Reconstruction program-damage and trajectory routine  
 (03) Missing vehicle algorithm

*Delta V Not Calculated*

- (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

*All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.*

- (05) Rollover  
 (06) Other non-horizontal forces  
 (07) Sideswipe type damage  
 (08) Severe override  
 (09) Yielding object  
 (10) Overlapping damage  
 (11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify): \_\_\_\_\_

(98) Other, (specify): \_\_\_\_\_



## COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

60. Longitudinal Component of Delta V Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than  
-0.5 kmph and less than +0.5 kmph)  
(±160) ±159.5 kmph and above  
(\_\_999) Unknown

61. Lateral Component of Delta V Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than -0.5 kmph and  
less than +0.5 kmph)  
(±160) ±159.5 kmph and above  
(\_\_999) Unknown

62. Energy Absorption Highest

\_\_\_\_\_ Nearest 100 joules (highest)

\_\_\_\_\_ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)  
(9997) 999,650 joules or more  
(9999) Unknown

63. Impact Speed Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(998) Trajectory algorithm not run  
(999) Unknown

## DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program  
Results (For Highest Delta V)

- (0) No reconstruction  
(1) Collision fits model — results appear reasonable  
(2) Collision fits model — results appear high  
(3) Collision fits model — results appear low  
(4) Borderline reconstruction — results appear reasonable

## OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

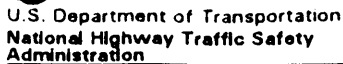
ESTIMATED DELTA V	INSPECTION TYPE		
<p>66. Estimated Highest Delta V (Researcher Determined) _____</p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) ≥ 10 kmph but &lt; 25 kmph</p> <p>(3) ≥ 25 kmph but &lt; 40 kmph</p> <p>(4) ≥ 40 kmph but &lt; 55 kmph</p> <p>(5) ≥ 55 kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection _____</p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify): _____</p> <p>(3) Complete inspection</p> <tr> <th colspan="2">DELTA V EVENT NUMBER</th></tr> <p>68. Delta V Event Number _____</p> <p>_____ Code the accident event sequence number that resulted in the Delta V that has been coded above for this vehicle</p> <p>(99) Unknown</p>	DELTA V EVENT NUMBER	
DELTA V EVENT NUMBER			

\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67 = 0), \*\*\*

**DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS**

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

**THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.**



**NATIONAL ACCIDENT SAMPLING SYSTEM  
CRASHWORTHINESS DATA SYSTEM**

[illegible]

# ORIGINAL SPECIFICATIONS WORK SHEET

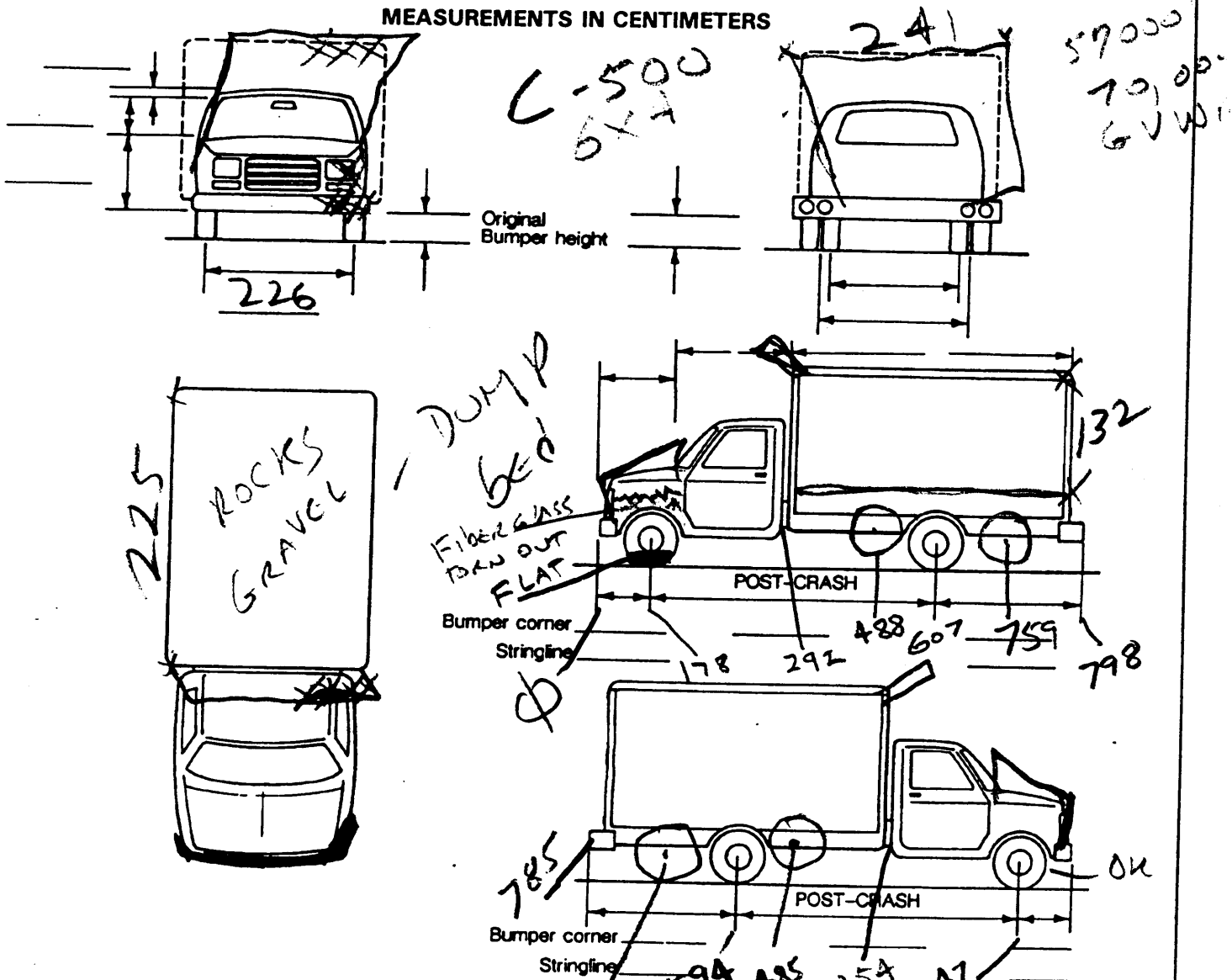
Wheelbase	___ . ___	inches	x 2.54	=	___ . ___	cm
Overall Length	___ . ___	inches	x 2.54	=	___ . ___	cm
Maximum Width	___ . ___	inches	x 2.54	=	___ . ___	cm
Curb Weight	___ , ___	pounds	x .4536	=	___ , ___	kg
Average Track	___ . ___	inches	x 2.54	=	___ . ___	cm
Front Overhang	___ . ___	inches	x 2.54	=	___ . ___	cm
Rear Overhang	___ . ___	inches	x 2.54	=	___ . ___	cm
Undeformed End Width	___ . ___	inches	x 2.54	=	___ . ___	cm
Engine Size: cyl./displ.	___ . ___	cc	x .001	=	___ . ___	L
	___ . ___	CID	x .0164	=	___ . ___	L



## VEHICLE DAMAGE SKETCH

<b>TIRE—WHEEL DAMAGE</b> a. Rotation physically restricted RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.	<b>ORIGINAL SPECIFICATIONS</b> Wheelbase _____ cm Overall Length _____ cm Maximum Width _____ cm Curb Weight _____ kg Average Track <u>226</u> cm Front Overhang _____ cm Rear Overhang _____ cm Undeformed End Width _____ cm Engine Size: cyl./displ. _____ L	<b>WHEEL STEER ANGLES</b> (For locked front wheels or displaced rear axles only) RF ± _____ ° LF ± _____ ° RR ± _____ ° LR ± _____ ° Within ± 5 degrees
<b>TYPE OF TRANSMISSION</b> <input checked="" type="checkbox"/> Manual <input type="checkbox"/> Automatic END SHIFT ≥ 10 CM <input type="checkbox"/> Yes <input type="checkbox"/> No	<b>DRIVE WHEELS</b> <input type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD Approximate Cargo Weight _____ kg	

### MEASUREMENTS IN CENTIMETERS



**NOTES:** Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

**CODES FOR OBJECT CONTACTED**

(99) Unknown event or object

[illegible]

**COLLISION DEFORMATION CLASSIFICATION****HIGHEST DELTA "V"**

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. _____	5. _____	6. _____	7. _____	8. _____	9. _____	10. _____	11. _____

**Second Highest Delta "V"**

12. _____	13. _____	14. _____	15. _____	16. _____	17. _____	18. _____	19. _____
-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

**CRUSH PROFILE IN CENTIMETERS**

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

**HIGHEST DELTA "V"**

20. _____ L	21. _____ C <sub>1</sub>	_____ C <sub>2</sub>	_____ C <sub>3</sub>	_____ C <sub>4</sub>	_____ C <sub>5</sub>	_____ C <sub>6</sub>	22. _____ ± D
							+
							=

**Second Highest Delta "V"**

23. _____ L	24. _____ C <sub>1</sub>	_____ C <sub>2</sub>	_____ C <sub>3</sub>	_____ C <sub>4</sub>	_____ C <sub>5</sub>	_____ C <sub>6</sub>	25. _____ ± D
							+
							=

**26. Undeformed End Width**

(Coded when highest severity impact is an end plane impact.)

\_\_\_\_\_ Code to the nearest centimeter

(250) 250 centimeters or more

(998) No highest severity end plane impact

(999) Unknown

**27. Direct Damage Width**

(For highest severity impact)

\_\_\_\_\_ Code to the nearest centimeter

(250) 250 centimeters or more

(999) Unknown

**28. Original Wheelbase**

\_\_\_\_\_ Code to the nearest centimeter

(650) 650 centimeters or more

(999) Unknown

\_\_\_\_\_ . \_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

**29. Original Average Track Width**

\_\_\_\_\_ Code to the nearest centimeter

(185) 185 centimeters or more

(999) Unknown

\_\_\_\_\_ . \_\_\_\_\_ inches X 2.54 = \_\_\_\_\_ centimeters

## FUEL SYSTEM

30. Are CDCs Documented  
but Not Coded on The  
Automated File?

- (0) No  
(1) Yes

31. Researcher's Assessment of Vehicle  
Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

32. Is This A Multi-Stage Manufactured Vehicle  
And/Or A Certified Altered Vehicle?

- (0) No post manufacturer modifications  
(1) Yes - post manufacturer modifications  
(specify): TRUCK - DUMP

(Include photograph of CERTIFICATION  
PLACARD in case report)

- (9) Unknown if vehicle is modified

## FIRE OCCURRENCE

33. Fire Occurrence

- (0) No fire

Yes, fire occurred

- (1) Minor  
(2) Major  
(9) Unknown

34. Origin of Fire

- (0) No fire  
(1) Vehicle exterior (front, side, back, top)  
(2) Exhaust system  
(3) Fuel tank (and other fuel retention  
system parts)  
(4) Engine compartment  
(5) Cargo/trunk compartment  
(6) Instrument panel  
(7) Passenger compartment area  
(8) Other location (specify):

- (9) Unknown

35. Location of Fuel Tank-1 Filler Cap

36. Location of Fuel Tank-2 Filler Cap

- (0) No fuel tank  
(1) On back plane  
(2) Aft of center of the rear wheels (rear axle) on  
left side plane  
(3) Aft of center of the rear wheels (rear axle) on  
right side plane  
(4) Forward of center of the rear wheels (rear  
axle) on left side plane  
(5) Forward of center of the rear wheels (rear  
axle) on right side plane  
(6) Over the center of the rear wheels (rear axle)  
on left side plane  
(7) Over the center of the rear wheels (rear axle)  
on right side plane  
(8) Other (specify):  
(9) Unknown

37. Type of Fuel Tank-1

38. Type of Fuel Tank-2

- (0) No fuel tank (electrical vehicle)  
(1) Metallic  
(2) Non-metallic  
(9) Unknown

39. Location of Fuel Tank-1

40. Location of Fuel Tank-2

- (0) No fuel tank  
(1) Aft of center of the rear wheels (rear axle)  
centered  
(2) Aft of center of the rear wheels (rear axle) left  
side  
(3) Aft of center of the rear wheels (rear axle)  
right side  
(4) Forward of center of the rear wheels (rear  
axle) centered  
(5) Forward of center of the rear wheels (rear  
axle) left side  
(6) Forward of center of the rear wheels (rear  
axle) right side  
(7) Over center of the rear wheels (rear axle)  
(8) Other (specify):  
(9) Unknown

41. Damage to Fuel Tank-1

42. Damage to Fuel Tank-2

- (0) No fuel tank  
(1) No damage to fuel tank  
(2) Deformed, no seam failure  
(3) Deformed, with a seam failure  
(4) Punctured  
(5) Lacerated (ripped)  
(6) Abraded (scraped)  
(7) Filler neck separation from the fuel tank  
(8) Other damage (specify):  
(9) Unknown



<p>43. Leakage Location of Fuel System-1 <span style="float: right;"><u>9</u></span></p> <p>44. Leakage Location of Fuel System-2 <span style="float: right;"><u>9</u></span></p> <p>(0) No fuel tank (1) No fuel leakage</p> <p><i>Primary Area Of Leakage</i></p> <p>(2) Tank (3) Filler neck (4) Cap (5) Lines/pump/filter (6) Vent/emission recovery (8) Other (specify): _____ (9) Unknown</p> <p>45. Fuel Type-1 <span style="float: right;"><u>99</u></span></p> <p>46. Fuel Type-2 <span style="float: right;"><u>99</u></span></p> <p><i>Single Fuel Type</i></p> <p>(00) No fuel tank (01) Gasoline (02) Diesel (03) CNG (Compressed Natural Gas) (04) LPG (Liquid Petroleum Gas) also known as Propane (05) LNG (Liquid Natural Gas) (06) Methanol (M100 or M85) (07) Ethanol (E100 or E85) (08) Other (Hydrogen or others) (specify): _____</p> <p><i>Electric Powered or Electric/Solar Powered Vehicles</i></p> <p>(10) Lead Acid Battery (11) Nickel-Iron Battery (12) Nickel-Cadmium Battery (13) Sodium Metal Chloride Battery (14) Sodium Sulfur Battery (18) Other (Specify): _____</p> <p>(98) Other Hybrid (specify): _____</p> <p>(99) Unknown fuel type</p>	<p>47. Is This Vehicle Equipped With More Than Two Fuel Tanks? <span style="float: right;"><u>9</u></span></p> <p>(0) No (one or two tanks only)</p> <p><i>Yes - More Than Two Tanks</i></p> <p>(1) Yes -- <u>no damage</u> to any tank or filler cap and <u>no fuel system leakage</u></p> <p>(2) Yes -- <u>no damage</u> to any tank or filler cap but <u>there is fuel system leakage</u> (specify leakage location): _____</p> <p>(3) Yes -- <u>damage</u> to an additional tank or filler cap and <u>there is fuel system leakage</u> (specify the following): Type of tank _____ Tank location _____ Filler cap location _____ Tank damage _____ Location of leakage _____ Type of fuel _____</p> <p>(9) Unknown if more than two tanks</p> <div style="text-align: center; border: 1px solid black; padding: 10px; min-height: 200px;"><b>COMMENTS</b>  _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____</div>
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\*\*\* STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED \*\*\*

(GV10=0)

DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



## GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

DSI-95-5B-020

3. Vehicle Number

03

### VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year  
(99) Unknown

84

5. Vehicle Make (specify):

FORD

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(99) Unknown

12

6. Vehicle Model (specify):

F-60

Applicable codes are found in your  
NASS Data Collection, Coding and  
Editing Manual.  
(999) Unknown

881

7. Body Type

Note: Applicable codes may be found on  
the back of this page.

67

8. Vehicle Identification Number

1EDNE60HSEVXXXXXX  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

Left justify; Slash zeros and letter Z (0 and Z)  
No VIN—Code all zeros  
Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use  
(1) Taxi  
(2) Vehicle used as school bus  
(3) Vehicle used as other bus  
(4) Military  
(5) Police  
(6) Ambulance  
(7) Fire truck or car  
(8) Other (specify):  
(9) Unknown

0

### OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage  
(1) Towed due to vehicle damage  
(9) Unknown

0

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means  
less than 0.5 kmph)  
(160) 159.5 kmph and above  
(999) Unknown

048

30 mph X 1.6093 = 048 kmph

12. Speed Limit

(000) No statutory limit  
Code posted or statutory speed limit in kmph  
(999) Unknown

000

50 mph X 1.6093 = 080 kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present  
(1) Yes alcohol present  
(7) Not reported  
(8) No driver present  
(9) Unknown

0

14. Alcohol Test Result For Driver

Code actual value (decimal implied  
before first digit—0.xx)  
(95) Test refused  
(96) None given  
(97) AC test performed, results unknown  
(98) No driver present  
(99) Unknown

96

Source:

PAR

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present  
(1) Yes other drug(s) present  
(7) Not reported  
(8) No driver present  
(9) Unknown

0

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given  
(1) Drug(s) not found in specimen  
(2) Drug(s) found in specimen, (specify):  
(3) Specimen test given, results unknown or not  
obtained  
(8) No driver present  
(9) Unknown if specimen test given

0

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories  
Code actual 5-digit zip code  
(99998) No driver present  
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)  
(2) Black (non-Hispanic)  
(3) White (Hispanic)  
(4) Black (Hispanic)  
(5) American Indian, Eskimo or Aleut  
(6) Asian or Pacific Islander  
(7) Other (specify):  
(8) No driver present  
(9) Unknown

3

# CODES FOR BODY TYPE

## CDS APPLICABLE VEHICLES

### Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): \_\_\_\_\_
- (09) Unknown automobile type

### Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

### Utility Vehicles ( $\leq 4,536$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

### Van Based Light Trucks ( $\leq 4,536$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ( $\leq 4,536$  kgs GVWR)
- (23) Van based motorhome ( $\leq 4,536$  kgs GVWR)
- (24) Van based school bus ( $\leq 4,536$  kgs GVWR)
- (25) Van based other bus ( $\leq 4,536$  kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): \_\_\_\_\_
- (29) Unknown van type

### Light Conventional Trucks (Pickup style cab, $\leq 4,536$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)
- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

### Other Light Trucks ( $\leq 4,536$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

## OTHER VEHICLES

### Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): \_\_\_\_\_
- (59) Unknown bus type

### Medium/Heavy Trucks ( $> 4,536$ kgs GVWR)

- (60) Step van ( $> 4,536$  kgs GVWR)
- (61) Single unit straight truck ( $4,536$  kgs  $<$  GVWR  $\leq 8,845$  kgs)
- (62) Single unit straight truck ( $8,845$  kgs  $<$  GVWR  $\leq 11,793$  kgs)
- (63) Single unit straight truck ( $> 11,793$  kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

### Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): \_\_\_\_\_
- (89) Unknown motored cycle type

### Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

## PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2

- (0) Non-interchange area and non-junction  
 (1) Interchange area related

*Non-Interchange junctions*

- (2) Intersection related  
 (3) Driveway, alley access related  
 (4) Other junction (specify) \_\_\_\_\_

(5) Unknown type of junction \_\_\_\_\_

(9) Unknown

20. Trafficway Flow Ø

- (0) Not physically divided (two way traffic)  
 (1) Divided trafficway-median strip without positive barrier  
 (2) Divided trafficway-median strip with positive barrier  
 (3) One way traffic  
 (9) Unknown

21. Number Of Travel Lanes 2

- (1) One  
 (2) Two  
 (3) Three  
 (4) Four  
 (5) Five  
 (6) Six  
 (7) Seven or more  
 (9) Unknown

22. Roadway Alignment 1

- (1) Straight  
 (2) Curve right  
 (3) Curve left  
 (9) Unknown

23. Roadway Profile 1

- (1) Level  
 (2) Uphill grade (> 2%)  
 (3) Hill crest  
 (4) Downhill grade (> 2%)  
 (5) Sag  
 (9) Unknown

24. Roadway Surface Type 2

- (1) Concrete  
 (2) Bituminous (asphalt)  
 (3) Brick or block  
 (4) Slag, gravel, or stone  
 (5) Dirt  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

25. Roadway Surface Condition 1

- (1) Dry  
 (2) Wet  
 (3) Snow or slush  
 (4) Ice  
 (5) Sand, dirt, or oil  
 (8) Other (specify): \_\_\_\_\_  
 (9) Unknown

26. Light Conditions 1

- (1) Daylight  
 (2) Dark  
 (3) Dark, but lighted  
 (4) Dawn  
 (5) Dusk  
 (9) Unknown

27. Atmospheric Conditions Ø

- (0) No adverse atmospheric-related driving conditions  
 (1) Rain  
 (2) Sleet/hail  
 (3) Snow  
 (4) Fog  
 (5) Rain and fog  
 (6) Sleet and fog  
 (7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): \_\_\_\_\_  
 (9) Unknown

28. Traffic Control Device Ø

- (0) No traffic control(s)  
 (1) Traffic control signal (not RR crossing)

*Regulatory*

- (2) Stop sign  
 (3) Yield sign  
 (4) School zone sign  
 (5) Other regulatory sign (specify): \_\_\_\_\_

- (6) Warning sign (not RR crossing)  
 (7) Unknown sign  
 (8) Miscellaneous/other controls including RR controls (specify): \_\_\_\_\_

(9) Unknown

29. Traffic Control Device Functioning Ø

- (0) No traffic control device  
 (1) Traffic control device not functioning (specify): \_\_\_\_\_  
 (2) Traffic control device functioning properly  
 (9) Unknown



**PRECRASH DRIVER RELATED DATA****30. Driver's Distraction/Inattention To Driving**  
(Prior To Recognition Of Critical Event)

- (00) No driver present  
 (01) Attentive or not distracted  
 (02) Looked but did not see

*Distractions*

(03) By other occupant(s), (specify): \_\_\_\_\_

(04) By moving object in vehicle (specify): \_\_\_\_\_

(05) While talking or listening to cellular phone (specify location and type of phone): \_\_\_\_\_

(06) While dialing cellular phone (specify location and type of phone): \_\_\_\_\_

(07) While adjusting climate controls

(08) While adjusting radio, cassette, CD (specify): \_\_\_\_\_

(09) While using other device/controls integral to vehicle (specify): \_\_\_\_\_

(10) While using or reaching for device/object brought into vehicle (specify): \_\_\_\_\_

(11) Sleepy or fell asleep

(12) Distracted by outside person, object, or event (specify): \_\_\_\_\_

(13) Eating or drinking

(14) Smoking related

(97) Distracted/inattentive, details unknown

(98) Other, distraction (specify): \_\_\_\_\_

(99) Unknown

**31. Pre-Event Movement**  
(Prior to Recognition of Critical Event)

- (00) No driver present  
 (01) Going straight  
 (02) Decelerating in traffic lane  
 (03) Accelerating in traffic lane  
 (04) Starting in traffic lane  
 (05) Stopped in traffic lane  
 (06) Passing or overtaking another vehicle  
 (07) Disabled or parked in travel lane  
 (08) Leaving a parking position  
 (09) Entering a parking position  
 (10) Turning right  
 (11) Turning left  
 (12) Making a U-turn  
 (13) Backing up (other than for parking position)  
 (14) Negotiating a curve  
 (15) Changing lanes  
 (16) Merging  
 (17) Successful avoidance maneuver to a previous critical event  
 (97) Other (specify): \_\_\_\_\_  
 (99) Unknown

**32. Critical Precrash Event****THIS VEHICLE LOSS OF CONTROL DUE TO:**

- (01) Blow out or flat tire  
 (02) Stalled engine  
 (03) Disabling vehicle failure (e.g., wheel fell off) (specify): \_\_\_\_\_  
 (04) Non-disabling vehicle problem (e.g., hood flew up) (specify): \_\_\_\_\_  
 (05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): \_\_\_\_\_  
 (06) Traveling too fast for conditions  
 (08) Other cause of control loss (specify): \_\_\_\_\_  
 (09) Unknown cause of control loss

**THIS VEHICLE TRAVELLING**

- (10) Over the lane line on left side of travel lane  
 (11) Over the lane line on right side of travel lane  
 (12) Off the edge of the road on the left side  
 (13) Off the edge of the road on the right side  
 (14) End departure  
 (15) Turning left at intersection  
 (16) Turning right at intersection  
 (17) Crossing over (passing through) intersection  
 (18) This vehicle decelerating  
 (19) Unknown travel direction

**OTHER MOTOR VEHICLE IN LANE**

- (50) Other vehicle stopped  
 (51) Traveling in same direction with lower steady speed  
 (52) Traveling in same direction while decelerating  
 (53) Traveling in same direction with higher speed  
 (54) Traveling in opposite direction  
 (55) In crossover  
 (56) Backing  
 (59) Unknown travel direction of other motor vehicle in lane

**OTHER MOTOR VEHICLE ENCROACHING INTO LANE**

- (60) From adjacent lane (same direction)—over left lane line  
 (61) From adjacent lane (same direction)—over right lane line  
 (62) From opposite direction—over left lane line  
 (63) From opposite direction—over right lane line  
 (64) From parking lane  
 (65) From crossing street, turning into same direction  
 (66) From crossing street, across path  
 (67) From crossing street, turning into opposite direction  
 (68) From crossing street, intended path not known  
 (70) From driveway, turning into same direction  
 (71) From driveway, across path  
 (72) From driveway, turning into opposite direction  
 (73) From driveway, intended path not known  
 (74) From entrance to limited access highway  
 (78) Encroachment by other vehicle—details unknown

**PEDESTRIAN, PEDALCYCLIST, OR OTHER NONMOTORIST**

- (80) Pedestrian in roadway  
 (81) Pedestrian approaching roadway  
 (82) Pedestrian—unknown location  
 (83) Pedalcyclist or other nonmotorist in roadway

(specify): \_\_\_\_\_

(84) Pedalcyclist or other nonmotorist approaching roadway, (specify): \_\_\_\_\_

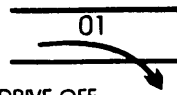
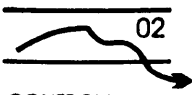
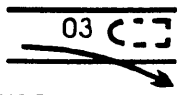


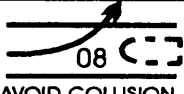
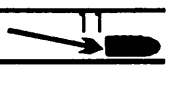
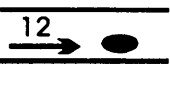

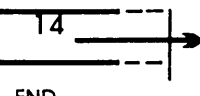
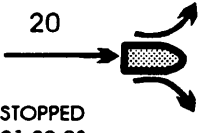
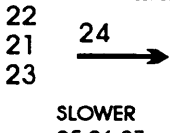
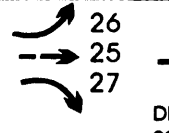
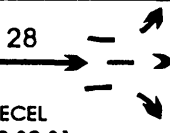
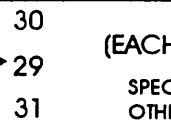


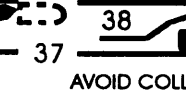
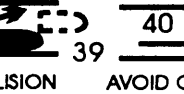

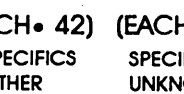
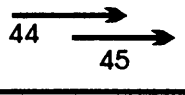
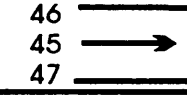
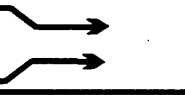
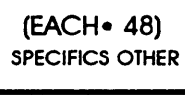




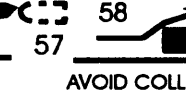
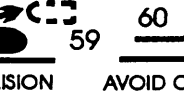

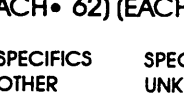



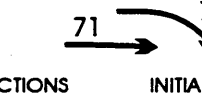


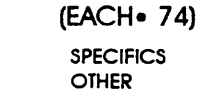

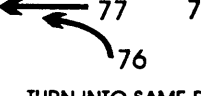

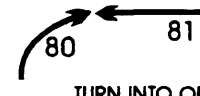
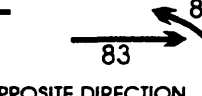



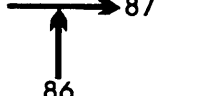
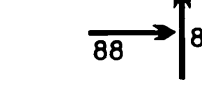
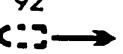
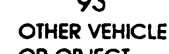
(85) Pedalcyclist or other nonmotorist—unknown location

(specify): \_\_\_\_\_

**OBJECT OR ANIMAL**

- (87) Animal in roadway  
 (88) Animal approaching roadway  
 (89) Animal—unknown location  
 (90) Object in roadway  
 (91) Object approaching roadway  
 (92) Object—unknown location  
 (98) Other critical precrash event (specify): \_\_\_\_\_

(99) Unknown

Category	Configuration	ACCIDENT TYPES (Includes Intent)							
I Single driver	A. Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH. PED. ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN			
	B. Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH. PED. ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN			
	C. Forward Impact	 11 PARKED VEHICLE	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER	16 SPECIFICS UNKNOWN		
II Same Trafficway Same Direction	D. Rear-End	 20 STOPPED 21,22,23	 22 21 23 SLOWER 25,26,27	 24 25 26 27 DECEL 29,30,31	 26 25 27 28 29 30 31 AVOID COLLISION WITH VEHICLE	 28 29 30 31 AVOID COLLISION WITH OBJECT	(EACH • 32) SPECIFICS OTHER	(EACH • 33) SPECIFICS UNKNOWN	
	E. Forward Impact	 34 CONTROL/ TRACTION LOSS	 35 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 37 AVOID COLLISION WITH VEHICLE	 38 AVOID COLLISION WITH VEHICLE	 39 AVOID COLLISION WITH OBJECT	(EACH • 42) SPECIFICS OTHER	(EACH • 43) SPECIFICS UNKNOWN
	F. Sideswipe/Angle	 44 45	 45 46 47	 46 45 47	 47 45 46	(EACH • 48) SPECIFICS OTHER	(EACH • 49) SPECIFICS UNKNOWN		
III Same Trafficway Opposite Direction	G. Head-On	 50 LATERAL MOVE	 51 LATERAL MOVE	(EACH • 52) SPECIFICS OTHER	(EACH • 53) SPECIFICS UNKNOWN				
	H. Forward Impact	 54 CONTROL/ TRACTION LOSS	 55 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 57 AVOID COLLISION WITH VEHICLE	 58 AVOID COLLISION WITH VEHICLE	 59 AVOID COLLISION WITH OBJECT	(EACH • 62) SPECIFICS OTHER	(EACH • 63) SPECIFICS UNKNOWN
	I. Sideswipe/Angle	 64 LATERAL MOVE	 65 LATERAL MOVE	(EACH • 66) SPECIFICS OTHER	(EACH • 67) SPECIFICS UNKNOWN				
IV Change Trafficway Vehicle Turning	J. Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 69 INITIAL SAME DIRECTION	 70 INITIAL SAME DIRECTION	 71 INITIAL SAME DIRECTION	 72 INITIAL SAME DIRECTION	 73 INITIAL SAME DIRECTION	(EACH • 74) SPECIFICS OTHER	(EACH • 75) SPECIFICS UNKNOWN
	K. Turn Into Path	 76 TURN INTO SAME DIRECTION	 77 TURN INTO SAME DIRECTION	 78 TURN INTO SAME DIRECTION	 79 TURN INTO SAME DIRECTION	 80 TURN INTO OPPOSITE DIRECTION	 81 TURN INTO OPPOSITE DIRECTION	 82 TURN INTO OPPOSITE DIRECTION	(EACH • 84) SPECIFICS OTHER
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	 86 87	 87 88 89	(EACH • 90) SPECIFICS OTHER	(EACH • 91) SPECIFICS UNKNOWN				
VI. Miscellaneous	M. Backing Etc.	 92 BACKING VEHICLE	 93 OTHER VEHICLE OR OBJECT	98 Other Accident Type	99 Unknown Accident Type	00 No impact			

33. Attempted Avoidance Maneuver 01

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify):

(9) Precrash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

36. Accident Type 98

(Note: Applicable codes on back of this page)

(00) No impact

Code the number of the diagram that best describes the accident circumstance

(98) Other accident type (specify):

(99) Unknown

**STOP HERE IF GV07 DOES NOT EQUAL 01 - 49**

**OCCUPANT RELATED**

37. Driver Presence in Vehicle \_\_\_\_\_  
 (0) Driver not present  
 (1) Driver present  
 (9) Unknown
38. Number of Occupants This Vehicle \_\_\_\_\_  
 (00-96) Code actual number of occupants  
       for this vehicle  
 (97) 97 or more  
 (99) Unknown
39. Number of Occupant Forms Submitted \_\_\_\_\_

**AIR BAG RELATED**

40. Is this an AOPS Vehicle? \_\_\_\_\_  
 (0) No (includes unknown)  
 (1) Yes - researcher determined  
 (2) VIN determined air bag system  
 (3) VIN determined automatic (passive) belts  
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal \_\_\_\_\_  
 (0) Not equipped or not available  
 (1) No air bags deployed  
*Single Air Bag Vehicle*  
 (2) Driver air bag deployed  
 (3) Driver air bag, unknown if deployed  
*Multiple Air Bag Vehicle*  
 (4) Driver side only deployed  
 (5) Passenger side only deployed  
 (6) Driver and passenger side deployed  
 (7) Driver and passenger side unknown if deployed  
 (8) Air bag(s) deployed, details unknown  
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal \_\_\_\_\_  
 (0) Not equipped with an "other" air bag  
 (1) Deployed during accident (as a result of impact)  
 (2) Deployed inadvertently just prior to accident  
 (3) Deployed, details unknown  
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)  
 (5) Unknown if deployed  
 (7) Nondeployed  
 (9) Unknown

Specify type of "other" air bag present: \_\_\_\_\_

**VEHICLE WEIGHT ITEMS**

43. Vehicle Curb Weight \_\_\_\_\_ 0  
       Code weight to nearest  
       10 kilograms.  
 (045) Less than 454 kilograms  
 (612) 6,124 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_

44. Vehicle Cargo Weight \_\_\_\_\_ 0  
       Code weight to nearest  
       10 kilograms.  
 (000) Less than 5 kilograms  
 (454) 4,536 kilograms or more  
 (999) Unknown  
 \_\_\_\_\_ lbs X .4536 = \_\_\_\_\_ kgs  
 Source: \_\_\_\_\_

**ROLLOVER DATA**

45. Rollover \_\_\_\_\_  
 (00) No rollover (no overturning)  
*Rollover (primarily about the longitudinal axis)*  
 (01-16) Code the number of quarter turns  
 (17) Rollover, 17 or more quarter turns (specify): \_\_\_\_\_  
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)  
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type \_\_\_\_\_  
 (00) No rollover  
 (01) Trip-over  
 (02) Flip-over  
 (03) Turn-over  
 (04) Climb-over  
 (05) Fall-over  
 (06) Bounce-over  
 (07) Collision with another vehicle  
 (08) Other rollover initiation type specify): \_\_\_\_\_  
 (98) Rollover--end-over-end  
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation \_\_\_\_\_  
 (0) No rollover  
 (1) On roadway  
 (2) On shoulder--paved  
 (3) On shoulder--unpaved  
 (4) On roadside or divided trafficway median  
 (8) Rollover--end-over-end  
 (9) Unknown
48. Rollover Initiation Object Contacted \_\_\_\_\_  
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied \_\_\_\_\_  
 (0) No rollover  
 (1) Wheels/tires  
 (2) Side plane  
 (3) End plane  
 (4) Undercarriage  
 (5) Other location on vehicle (specify): \_\_\_\_\_  
 (6) Non-contact rollover forces (specify): \_\_\_\_\_  
 (8) Rollover--end-over-end  
 (9) Unknown
50. Direction of Initial Roll \_\_\_\_\_  
 (0) No rollover  
 (1) Roll right - primarily about the longitudinal axis  
 (2) Roll left - primarily about the longitudinal axis  
 (8) Rollover--end-over-end  
 (9) Unknown roll direction



## CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

- (00) No rollover
- (01-30) — Vehicle Number

### Noncollision

- (31) Turn-over — fall-over
- (32) No rollover impact initiation (end-over-end)
- (34) Jackknife

### Collision With Fixed Object

- (41) Tree ( $\leq 10$  cm in diameter)
- (42) Tree ( $> 10$  cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment

- (45) Breakaway pole or post (any diameter)

### Nonbreakaway Pole or Post

- (50) Pole or post ( $\leq 10$  cm in diameter)
- (51) Pole or post ( $> 10$  cm but  $\leq 30$  cm in diameter)
- (52) Pole or post ( $> 30$  cm in diameter)
- (53) Pole or post (diameter unknown)

- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)  
(specify): \_\_\_\_\_

- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): \_\_\_\_\_

- (69) Unknown fixed object \_\_\_\_\_

### Collision with Nonfixed Object

- (70) Passenger car, light truck, van, or other vehicle not in-transport
- (71) Medium/heavy truck or bus not in-transport
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (79) Object fell from vehicle in-transport
- (88) Other nonfixed object (specify): \_\_\_\_\_

- (89) Unknown nonfixed object \_\_\_\_\_

- (98) Other event (specify): \_\_\_\_\_

- (99) Unknown event or object \_\_\_\_\_

**VERRIDE/UNDERRIDE (THIS VEHICLE)**

51. Front Override/Underride (this Vehicle) \_\_\_\_\_

52. Rear Override/Underride (this Vehicle) \_\_\_\_\_

- (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride

*Override (see specific CDC)**[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]*

- (1) 1st CDC  
(2) 2nd CDC  
(3) Other not automated CDC (specify): \_\_\_\_\_

*Underride (see specific CDC)**[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]*

- (4) 1st CDC  
(5) 2nd CDC  
(6) Other not automated CDC (specify): \_\_\_\_\_

- (7) Medium/heavy truck or bus override (of any configuration)  
(9) Unknown

**HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V**

Values: (000)-(359) Code actual value  
(996) Non-horizontal impact  
(997) Noncollision  
(998) Impact with object  
(999) Unknown

53. Heading Angle For This Vehicle \_\_\_\_\_

54. Heading Angle For Other Vehicle \_\_\_\_\_

**RECONSTRUCTION DATA**

55. Towed Trailing Unit \_\_\_\_\_

- (0) No towed unit  
(1) Yes—towed trailing unit  
(9) Unknown

56. Documentation of Trajectory Data for This Vehicle \_\_\_\_\_

- (0) No  
(1) Yes

57. Post Collision Condition of Tree or Pole (For Highest Delta V) \_\_\_\_\_

- (0) Not collision (for highest delta V) with tree or pole  
(1) Not damaged  
(2) Cracked/sheared  
(3) Tilted < 45 degrees  
(4) Tilted ≥ 45 degrees  
(5) Uprooted tree  
(6) Separated pole from base  
(7) Pole replaced  
(8) Other (specify): \_\_\_\_\_

(9) Unknown

**ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V**

58. Basis for Total (Resultant) Delta V (highest) \_\_\_\_\_

- (00) No vehicle inspection

*Delta V Calculated*

- (01) Reconstruction program-damage only routine  
(02) Reconstruction program-damage and trajectory routine  
(03) Missing vehicle algorithm

*Delta V Not Calculated*

- (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

*All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.*

- (05) Rollover  
(06) Other non-horizontal forces  
(07) Sideswipe type damage  
(08) Severe override  
(09) Yielding object  
(10) Overlapping damage  
(11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify): \_\_\_\_\_

(98) Other, (specify): \_\_\_\_\_

## COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V \_\_\_\_\_ Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)

(160) 159.5 kmph and above

(999) Unknown

60. Longitudinal Component of Delta V \_\_\_\_\_ + \_\_\_\_\_ Highest  
- \_\_\_\_\_

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than

-0.5 kmph and less than +0.5 kmph)

(±160) ±159.5 kmph and above

(\_\_999) Unknown

61. Lateral Component of Delta V \_\_\_\_\_ + \_\_\_\_\_ Highest  
- \_\_\_\_\_

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: \_\_000 means greater than -0.5 kmph and less than +0.5 kmph)

(±160) ±159.5 kmph and above

(\_\_999) Unknown

62. Energy Absorption \_\_\_\_\_ Highest  
\_\_\_\_\_ 0 0

\_\_\_\_\_ Nearest 100 joules (highest)

\_\_\_\_\_ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)

(9997) 999,650 joules or more

(9999) Unknown

63. Impact Speed \_\_\_\_\_ Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means

less than 0.5 kmph)

(160) 159.5 kmph and above

(998) Trajectory algorithm not run

(999) Unknown

## DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program Results (For Highest Delta V) \_\_\_\_\_

(0) No reconstruction

(1) Collision fits model — results appear reasonable

(2) Collision fits model — results appear high

(3) Collision fits model — results appear low

(4) Borderline reconstruction — results appear reasonable

## OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed \_\_\_\_\_ Highest

\_\_\_\_\_ Nearest kmph (highest)

\_\_\_\_\_ Nearest kmph (secondary)

(NOTE: 000 means

less than 0.5 kmph)

(160) 159.5 kmph and above

(999) Unknown

ESTIMATED DELTA V	INSPECTION TYPE		
<p>66. Estimated Highest Delta V (Researcher Determined) _____</p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) ≥ 10 kmph but &lt; 25 kmph</p> <p>(3) ≥ 25 kmph but &lt; 40 kmph</p> <p>(4) ≥ 40 kmph but &lt; 55 kmph</p> <p>(5) ≥ 55 kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection _____</p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify): _____</p> <p>(3) Complete inspection</p> <tr> <th colspan="2">DELTA V EVENT NUMBER</th></tr> <p>68. Delta V Event Number _____</p> <p>_____ Code the accident event sequence number that resulted in the Delta V that has been coded above for this vehicle</p> <p>(99) Unknown</p>	DELTA V EVENT NUMBER	
DELTA V EVENT NUMBER			

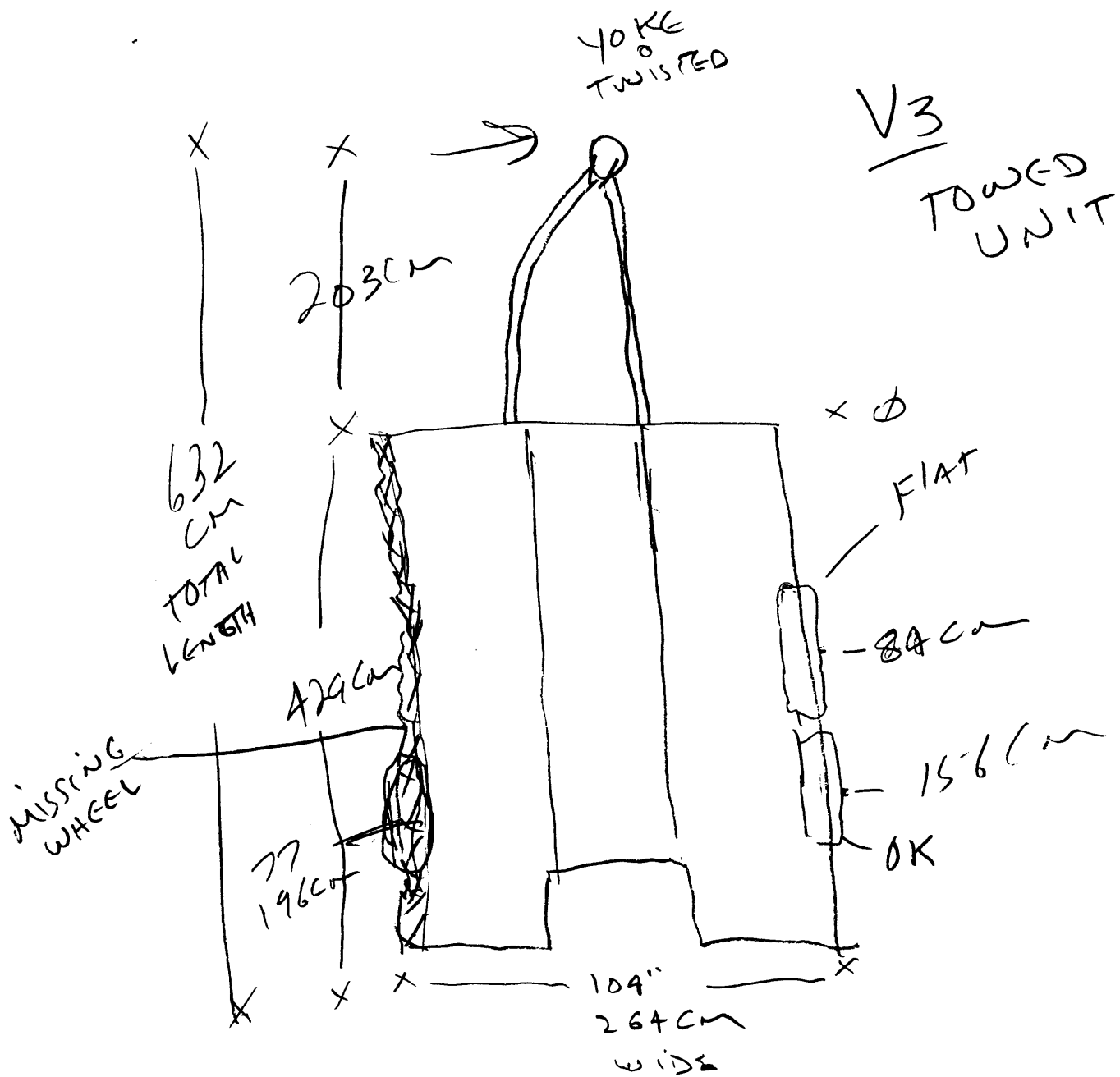
\*\*\* IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67 = 0), \*\*\*

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

\*\*\* IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE \*\*\*

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,  
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.





BROKEN AXLE

DAMAGE TO LEFT SIDE